

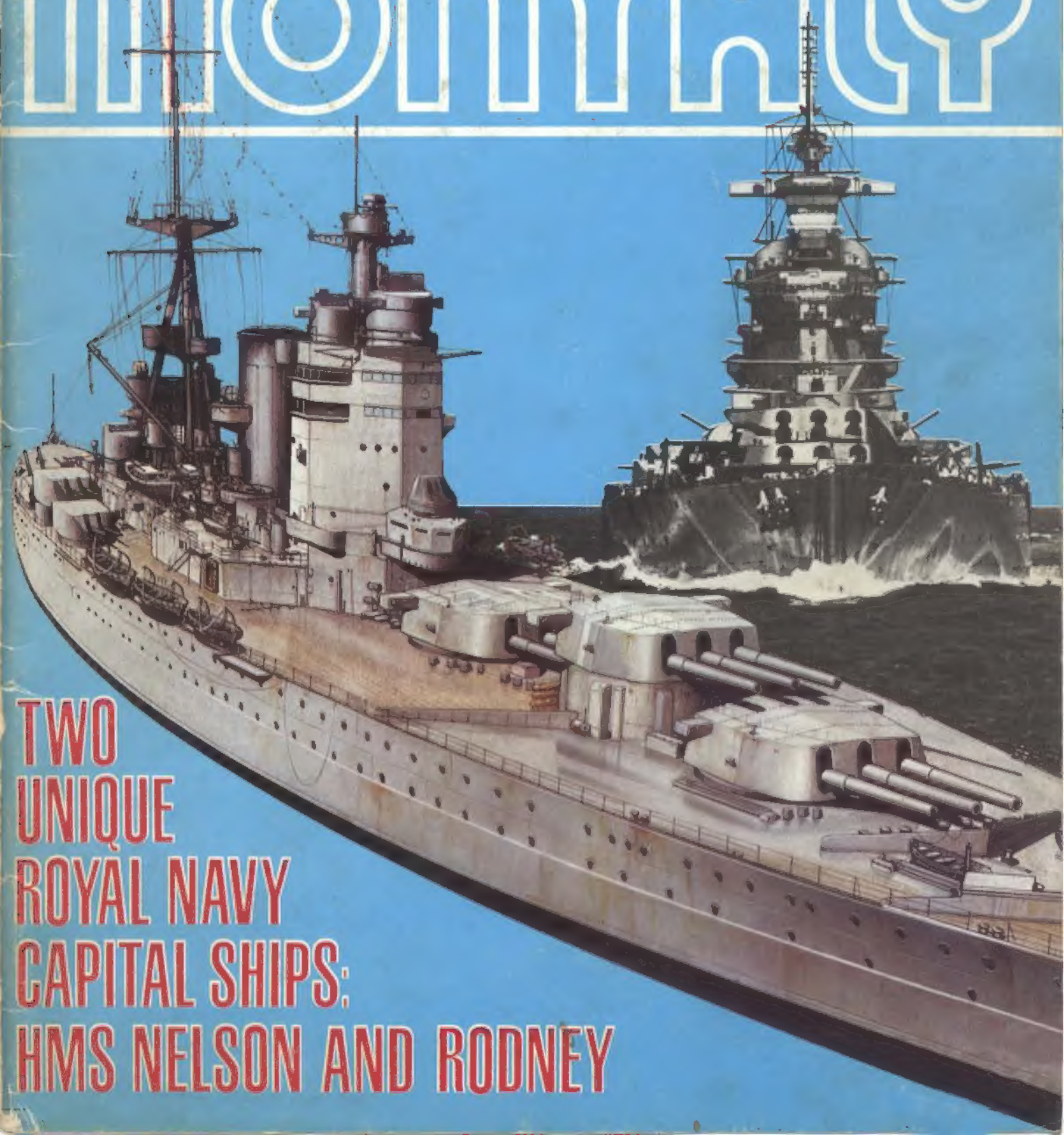
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French soldiers peer curiously over the trailing edge of the top wing of a Sopwith F1 Camel of 209 Sqn. The plane crashed at Viller-le-Roy, France, on 12 August 1918. Belts of .303 MG ammunition stretch out from the nose of E4389, the roundels of which are partially obliterated.

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WATERLOO

Napoleon's Army was beaten. And as the Emperor fled his enemies began a 17-day march on Paris



British Museum/Freeman

Wellington orders the General Advance of his army after the repulse of the Imperial Guard on the evening of Waterloo. He is back at the elm-tree command post (above La Haye Sainte) from which he had seen the battle start 8½ hours before.

The French knew it as Mont St. Jean, the Prussians as La Belle Alliance; the British have always known it as the Battle of Waterloo, a name that has become synonymous with downfall itself. The Duke of Wellington said: 'Never was there in the annals of the World so desperate or so hard fought an action, or such a defeat. It was really the battle of the Giants.' Waterloo is the finest example of the great battle of which the contemporary Prussian military theorist and participant in the campaign, Karl von Clausewitz, wrote: 'Here on this spot, in this very hour, to conquer the enemy is the purpose in which the plan of the War with all its threads converges . . .'. On Sunday 18 June, in the space of less than eight hours, within an area of 10 square miles, 200,000 men decided by merciless combat the fate of Europe. But the drama of that single day has tended to obscure what happened before and after.

Napoleon's reconquest of France in March 1815 was perhaps the most astonishing comeback of all time. The exiled Emperor, having escaped from Elba, landed in France at Cannes with only 1,200 men. The small column trudged northwards, the horseless cavalry hunched beneath the weight of their saddles, arousing no more interest than the odd hostile stare; in the first three days he gained only four recruits. But after reaching Grenoble his progress gathered momentum—'As far as Grenoble I was an adventurer; at Grenoble I was a prince.' Royalist resistance under the Duke of Angoulême crumbled, and within three weeks he was in Paris, working 16 hours a day at diplomacy

and doubling the French Army's strength.

The immediate effect of his amazing reappearance on the European stage was the prevention of war between the Allies who had defeated him in 1814 (Britain, France and Austria had already signed a secret alliance against Prussia and Russia). They declared him an outlaw on 13 March and mobilized their armies in the seventh coalition against France since 1792. But Napoleon was very much quicker: within eight more weeks he was on the march, this time with 124,000 veterans of the newly constituted *Armée du Nord*, half his mobilized strength, to conquer Belgium. For he was above all anxious not to strain the uncertain loyalty of his subjects by allowing the Allies to invade France. A quick and brilliant victory abroad would win him support at home and allow him to reassume absolute powers. Belgium he considered a part of France and it has no natural frontiers with France. However, the Emperor's greatest hope was that a victory over British forces in Belgium would bring the anti-war party to power in London and the Seventh Coalition would collapse.

In Belgium two Allied armies were assembling for the combined invasion of France—an Anglo-Dutch force under Field-Marshal the Duke of Wellington and a Prussian army under Field Marshal Prince Gebhard Blücher von Wahlstadt. These covered a front of 94 miles, the Anglo-Dutch to the west and the Prussians to the east, with the Brussels road between them.

Wellington said of his troops: 'I have an infamous army,

very weak and ill-equipped, and a very inexperienced staff.' He wished he could reassemble his old Peninsular veterans, but most were still in Canada or recrossing the Atlantic after the American war. He wrote to Lisbon asking for 12,000 of his faithful Portuguese. Nothing came of it. Worse still, the British government hesitated to call out the militia, which would have released regulars for service overseas, since war was as yet undeclared. So the Duke was left with a small army of doubtful quality. He had 7,000 men which had unsuccessfully attacked Bergen-op-Zoom in March 1814, and 25,000 other British troops including 6,000 cavalry from England. By a stroke of good luck, the King's German Legion was passing through Belgium to Hanover for disbandment; these 6,400 gallant soldiers were a most welcome addition. The Dutch-Belgian Army of 28,000 men, half veterans who had served under Napoleon, Wellington considered unreliable. He likewise placed little faith in 16,700 Hanoverians, for the infantry was made up entirely of *landwehr*, or reserve, battalions. About 6,800 Brunswickers and 2,880 Nassauers brought the grand total to 94,000 men. Yet Wellington succeeded in making this motley force far less unbalanced by a subtle mixing of the contingents. The French Royalist troops did not join the field army, Wellington dismissing them with: 'Oh! Don't mention such fellows. No, I think Blücher and I can do the business.'

However, the 117,000-strong Prussian army was also largely made up of ill-equipped *landwehr* battalions—some units had muskets of three different calibres—although in 73-year-old Prince Blücher they had a commander of unquenchable spirit who had fought Napoleon eight times since 1806.

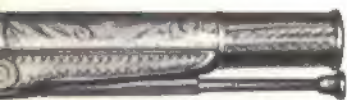
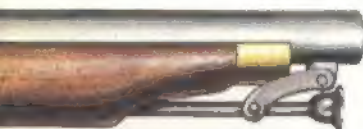
One of Napoleon's finest armies

By contrast the *Armée du Nord* was made up entirely of veterans, virtually every one a Frenchman and a volunteer (for Napoleon had only dared reintroduce a late and limited conscription) with an intense admiration for their leader and a burning desire for revenge. It was one of the finest armies Napoleon ever commanded, with an unusually high proportion of cavalry and artillery.

The Allies faced a daunting task. Since war had not yet been declared it was impossible to scout on French territory. Napoleon concealed his concentration behind the line of frontier fortresses and dense border woods so that the Allies, of necessity scattered over a considerable area, had little idea where he would strike. Wellington thought Napoleon would make a thrust round the western flank to cut him off from the Channel ports and made his dispositions accordingly. But the Emperor's bold plan was to drive a wedge through the middle of the two Allied armies, push them apart and defeat them in detail; first, because at this point the dismantling of Charleroi's fortifications in 1795 had removed a link from the chain of border fortresses on the Belgian side and, secondly, because he did not have sufficient strength to defeat Wellington and Blücher combined.

Nevertheless, by late evening on 15 June, the Duke, while attending the Duchess of Richmond's Ball in Brussels, finally realized that the full weight of the French attack was about to fall on Charleroi and ordered a concentration at Quatre Bras, horribly aware of having made a mistake which might have cost him the campaign—'Napoleon has humbugged me, by God! He has gained 24 hours' march on me.'





Flintlock pistols and long arms of 1815 vintage. 1 A Cossack pistol of .53in calibre. Cossack 1814 plundering of France was not repeated thanks to Waterloo. 2 An all-metal Scottish .7in pistol, perhaps carried by officers of the four Highland regts. 3 1804 French .67in cavalry and 4 British light cavalry pistols. 5 Brit. 1797 'India' pattern .75in 'Brown Bess' musket of 8½lb weight, 4½ft long without 18in bayonet. Also in a 1802 New land pattern version, 'Brown Bess' equipped about 20,000 men at Waterloo. 6 British 1800 Baker rifle with sword bayonet. More accurate than a musket with twice its range but taking twice as long to load, the Baker equipped 2,500 Waterloo infantry; Napoleon rejected the rifle in 1807. 7 French 1777 .69in musket with 16in bayonet. It weighed 10½lb.

After this masterly deception it was as well for the Allies that Napoleon underestimated 'the enterprising spirit of old Blücher', and Wellington's outstanding tactical skill which he had yet to encounter in person. While Wellington admired Napoleon's exceptional strategic ability, particularly his 1814 defense of France ('I have studied it very much'), Napoleon ignored advice founded on bitter French experience in the Peninsula and snapped at Marshal Nicolas Jean-de-Dieu Soult, his Chief of Staff: 'Because you were beaten by Wellington (in the Pyrenees and at Toulouse) you think he is a good general. I tell you, he is a bad general, the English are bad troops, and it will be a picnic.'

At first it seemed that he was right. On 16 June, only a day after crossing the frontier, he split the Allied armies in two exactly as intended by striking the Prussians such a blow at Ligny that it seemed he had knocked them right out of the war. On the same day Marshal Michel Ney ('Bravest of the brave'), fell on a pitifully small Dutch-Belgian force at Quatre Bras where the vital Brussels road crossed the equally important Namur road that led to Ligny. Wellington rushed reinforcements to the crossroads: for six hours the issue hung in the balance, until at last the over-cautious French fell back.

Napoleon . . . furious and horrified

It was at this stage that the French paid for their lack of a supply train, for though its absence enabled them to advance with amazing speed, the troops were forced to spend much of 17 June foraging while Wellington, his left flank exposed by the Prussian retreat, withdrew in good order. Napoleon, furious with Ney and horrified that the British were slipping from his grasp, personally urged the men in pursuit. But it was too late: the main body of the Anglo-Dutch army, ready to fight the next day after a promise of Prussian support, was already at Waterloo, in a position the Duke had noted 10 months earlier while inspecting Belgian defenses.

Wellington had selected a strong position in a country otherwise ideal for cavalry and large-scale infantry maneuver. In fact, his great fear was that the enemy would outmaneuver him, that they would outflank him to the west and in cutting him off from his supply base of Ostend, take Brussels and seize half Belgium; as a result he posted 17,000 sorely needed men, including nine British and Hanoverian infantry battalions, on this side near Hal, seven miles from Mont St. Jean. Yet this is precisely what Napoleon could not do without forcing Anglo-Dutch and Prussians together, for he retained a suspicion that the latter were not altogether finished, although he had no idea that Blücher was even at that moment driving his exhausted men towards Waterloo, shouting at them above a thunder storm: 'I have given my word to Wellington, and you will surely not make me break it.'

The Duke, anxious to preserve tactical flexibility, did not construct field-works as might have been expected. Greatly outnumbered in cavalry and guns, he resolved to fight a purely defensive battle similar to his early ones in Portugal and Spain. A low ridge across the position served to conceal and protect his infantry. To the front two stout buildings—the Chateau Hougoumont on the right and La Haye Sainte farmhouse in the center—acted as bastions to the line, and in these he placed elite troops. Two flooded rivers to the east guarded his left flank.

However, Napoleon, striving to snatch a quick victory,



Parker Gallery/Luke Kelly

A scene typical of Anglo-French infantry fighting at Waterloo; a two-deep redcoat line is charging a French column just shattered by close-range musket volleys. The follow-up with the bayonet seldom led to prolonged hand-to-hand fighting.

never even tried to outflank the Anglo-Dutch Army. The battle began shortly before noon on 18 June with what turned out to be the first of a long series of frontal attacks distinguished only by exceptional courage, conducted exactly in the manner the Duke would have wished, but had not dared to expect. The front on which the French tried to deploy was hopelessly narrow, and the 700-yard gap between Hougomont and La Haye Sainte, through which all the major assaults were directed, was exposed to murderous cross-fire. In Wellington's own words, 'Napoleon did not manoeuvre at all. He just moved forward in the old style, in columns, and was driven off in the old style.' Cavalry fared no better than infantry, for the massed bayonets bristling from the squares were enough to deter the bravest horsemen—'We had the French cavalry walking about us as if they had been our own.'

Wellington was always in the thick of the fighting at the critical points coolly giving orders and encouragement. By the end of the battle he was accompanied only by the Sardinian Count de Sales, for every member of his staff became a casualty. To counter the violent French attacks he adopted some unusual formations; apart from normal two-deep lines for repulsing infantry and four-deep hollow squares for repelling cavalry, he also formed four-deep lines to combine firepower with strength and even joined two battalions in square by one battalion in line, making a 'sort of curtain (wall) between two bastions.' While Napoleon concentrated his artillery in a grand battery for offensive fire, Wellington spread his pieces along the line and used them only for fighting off attacks; the gunners would fire until the last possible moment, then remove a wheel from the gun carriage and take refuge in the nearest square until the attack was over.

Despite every effort, the French could make little impression on this line aflame with cannon and musketry. Wellington was firmly resolved to fight to the last man; one brigade-major began to wonder if there had ever been a battle in which every soldier was killed. In Hougomont

a 3,500-strong garrison held out against repeated attacks by 14,000 Frenchmen, and La Haye Sainte only fell when its brave King's German Legion defenders ran out of ammunition. Even then, with the key to the position lost, the line did not break. The French resorted to sniping with swarms of infantrymen acting as *tirailleurs*, something not widespread since Revolutionary days.

And with the growing impact of 52,000 Prussians arriving during the evening, the last hope of French victory all but vanished. Napoleon, too late, committed the Imperial Guard in a final heroic attack but they too were overthrown, and with their failure, French morale collapsed. Wellington, sensing the moment, ordered the General Advance. As the tattered line swept forward the setting sun broke out from behind the clouds and a Prussian band struck up with 'God Save the King.' Napoleon had 'spent his last farthing, and then, as a beggar, abandoned both the battlefield and his crown.'

The defeat of the *Armée du Nord* at Waterloo, overwhelming though it was, by no means marked the end of the fighting. Even as the thunder of the last cannon echoed over that frightful scene another, vital and related struggle equally desperate, was raging only 10 miles away in the narrow streets of Wavre.

Marshal Count Emmanuel de Grouchy, ordered to pursue the retreating Prussians after the Battle of Ligny, took the 33,000 men and 96 guns of 3rd and 4th Corps—almost one third of the army. Although he failed to cut the Prussians off before they reached Wavre and began to turn west towards Waterloo, the advance-guard of Lt. Gen. Count Dominique René Vandamme's 3rd Corps arrived in front of the town just as the last units were drawing out. Only Colonel von Zeppelin's two fusilier battalions of Lt. Gen. Baron Johann Adolf von Thielemann's 17,000-strong 3rd Prussian Corps (40 guns) were in Wavre. Thielemann immediately halted when he saw the French massing to attack with the clear intention of taking the town and the bridges over the River Dyle which it covered. The defenders



Parker Gallery/Luke Kelly

Pursuit at dusk. Prussian cavalry charge the masses of French fugitives huddled around La Belle Alliance. Blücher's Chief of Staff, von Gneisenau, led a ruthless 10-mile pursuit 'by moonlight' while the French 'had a man and a horse to stand'.

barricaded these bridges and hastily loop-holed the houses facing the river, while reserves gathered behind Wavre, skilfully posted by Thielemann and his Chief of Staff Colonel von Clausewitz. The French soon occupied the right bank, but on trying to cross the bridges they came up against heavy fire. After two hours Lt. Gen. Count Etienne Maurice Gérard's 4th Corps came up to renew the onslaught. After another hour of fruitless assault Grouchy and Gérard dismounted and put themselves at the head of their men in another attack on the bridge at the Mill of Bierge to the south of the town. Gérard was badly wounded and the Prussians still clung tenaciously to the bridge.

Grouchy then moved round the south side of Wavre and took the village of Limale before nightfall, holding it despite a Prussian attack after dark. Fighting to the north of the town continued until an hour before midnight as four battalions defied the whole of Vandamme's Corps in 13 separate attacks. Five times the French crossed the river, even occupying lower floors of houses while Prussians resisted from the upper storeys.

Grouchy, unaware of Napoleon's defeat, prepared another attack on the Prussian right flank for the morning of 19 June. But the Prussians attacked first; Grouchy replied with an assault with three divisions and cavalry; Thielemann counter-attacked. He then received confirmation of what he had already heard—that the Allies had won a great victory the previous day; with this wonderful news the Prussians mounted another attack. But soon there was no further point in holding on, and his 10 battalions were being forced to give ground to Grouchy's 28. Thielemann began to withdraw, fighting savage rearguard actions all the while. His was a remarkable achievement against two-to-one odds, for not only had he covered the rear of the three Prussian Corps going to Wellington's aid, but he had also prevented two French Corps from joining Napoleon, inflicting 2,200 casualties at the cost of 2,500 during 10 hours fighting.

Now it was Grouchy's turn to retreat, a hazardous under-

taking which he conducted with skill, falling back on Namur and Dinant in an organized body, in marked contrast to the main army in full flight to the west. He slipped past the Prussian 2nd Corps which was sent to cut him off and on 20 June, fought Thielemann's vanguard near Namur; in the town itself he put up a fierce resistance, inflicting over 1,300 casualties on a single brigade and Lt. Gen. Baron Teste's 21st Division, which remained behind to cover the retreat, clung grimly to the town, even the officers arming themselves with muskets, before pulling out behind a burning barricade laid across the Sambre bridge.

Meanwhile, the main army had crossed the Sambre with the Prussians in hot pursuit. It was agreed that the two Allied armies should march for Paris on parallel lines according to the original plan, the Prussians to the east by Charleroi, Avesnes and Laon; the more exhausted Anglo-Dutch a day later by Nivelles, Binche and Péronne. From Philippeville Napoleon ordered the commandants of the fortresses not to surrender and instructed the field army, which in just four days had lost half its strength, to head for Paris by forced marches.

On 21 June Wellington fixed his HQ at Malplaquet, scene of Marlborough's victory in 1709. Both armies had by now reached the triple line of French fortresses—the Anglo-Dutch were to tackle Valenciennes, Lequesnoy and Cambrai; the Prussians, Landrecies, Avesnes and Rocroi. The Prussians bombarded Avesnes on 21 June and the French replied with a sally, but the 14th round of a midnight shoot blew up the magazine, destroying 40 houses. The garrison surrendered. The Prussians now possessed a good base and 43 heavy guns which they used against the other fortresses.

Both Blücher and Wellington realized the risks in advancing so far ahead of the other Allied armies. Wellington did everything in his power to win support from the French people, as he had done in the south during 1814, and to restrain the Prussians from exacting too terrible a revenge.

The campaign of 1815 in maps. Napoleon's four-day offensive in Belgium is shown top left and the week-long encirclement of Paris by the Allies bottom left. The campaign effectively ended within three weeks of Waterloo with the capitulation of the French capital on 3 July, but the other Allied armies were quick off the mark and had achieved impressive advances by that date, winning considerable battles at Donnmarié and before Strasbourg, both on 28 June. The French garrison of the frontier fortress of Montmédy held out till 13 September before retiring.

On 21 June Napoleon, leaving Soult in command of the army, reached Paris only nine days since quitting it. He failed to gain any sympathy from the Chamber of Deputies, would not seize supreme powers by military coup, and eventually abdicated for the second time on the following day.

But the fighting went on. The British troops of 4th Division, at Hal on 18 June, stormed Cambrai on 24 June for 37 casualties. Wellington and Blücher agreed to move round west of Paris. The Prussians took Guise without firing a shot, but on the night of the 25th knew that the French had fallen back on Soissons from Laon; the race to secure the River Oise crossings had begun. At Soissons Soult's and Grouchy's forces finally effected a junction; Grouchy was ordered by the Provisional Government to take over from Soult, and the latter left for Paris in disgust.

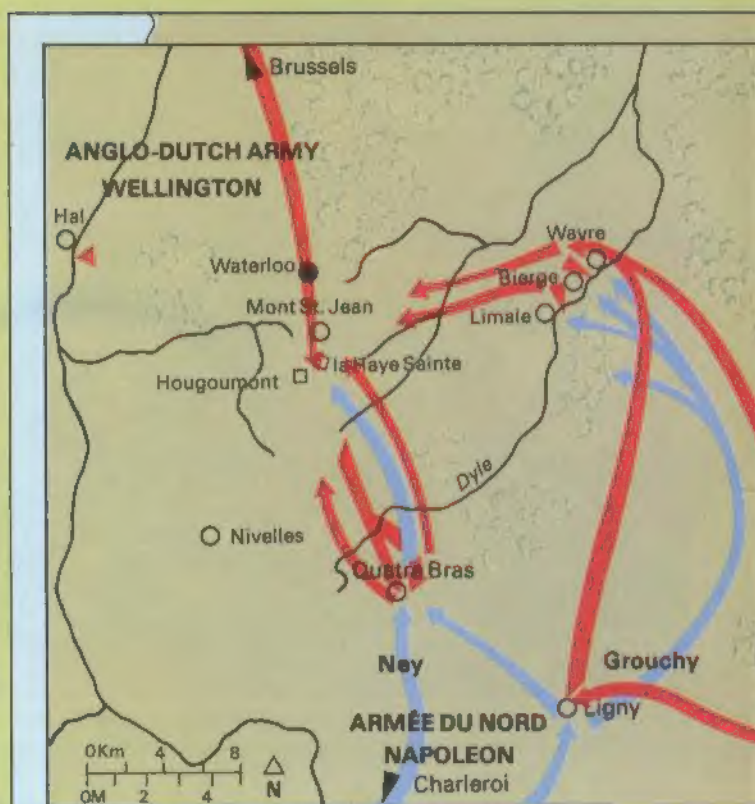
The light companies of the 1st Brigade of Guards captured the hornworks of Péronne on the 26th and the fortress fell. Lt. Gen Count Hans von Ziethen's Prussian 1st Corps reached Compiègne on the Oise after a 25-mile dash, arriving only half an hour before Lt. Gen. Count Drouet d'Erlon, with 4,000 of the rallied Waterloo fugitives, came into sight on the Soissons road. The pace of the Prussian advance was beginning to tell. Clausewitz wrote: 'The effort (175 miles in 17 days) we had to make was such that some people shot themselves in despair. Others fell dead.'

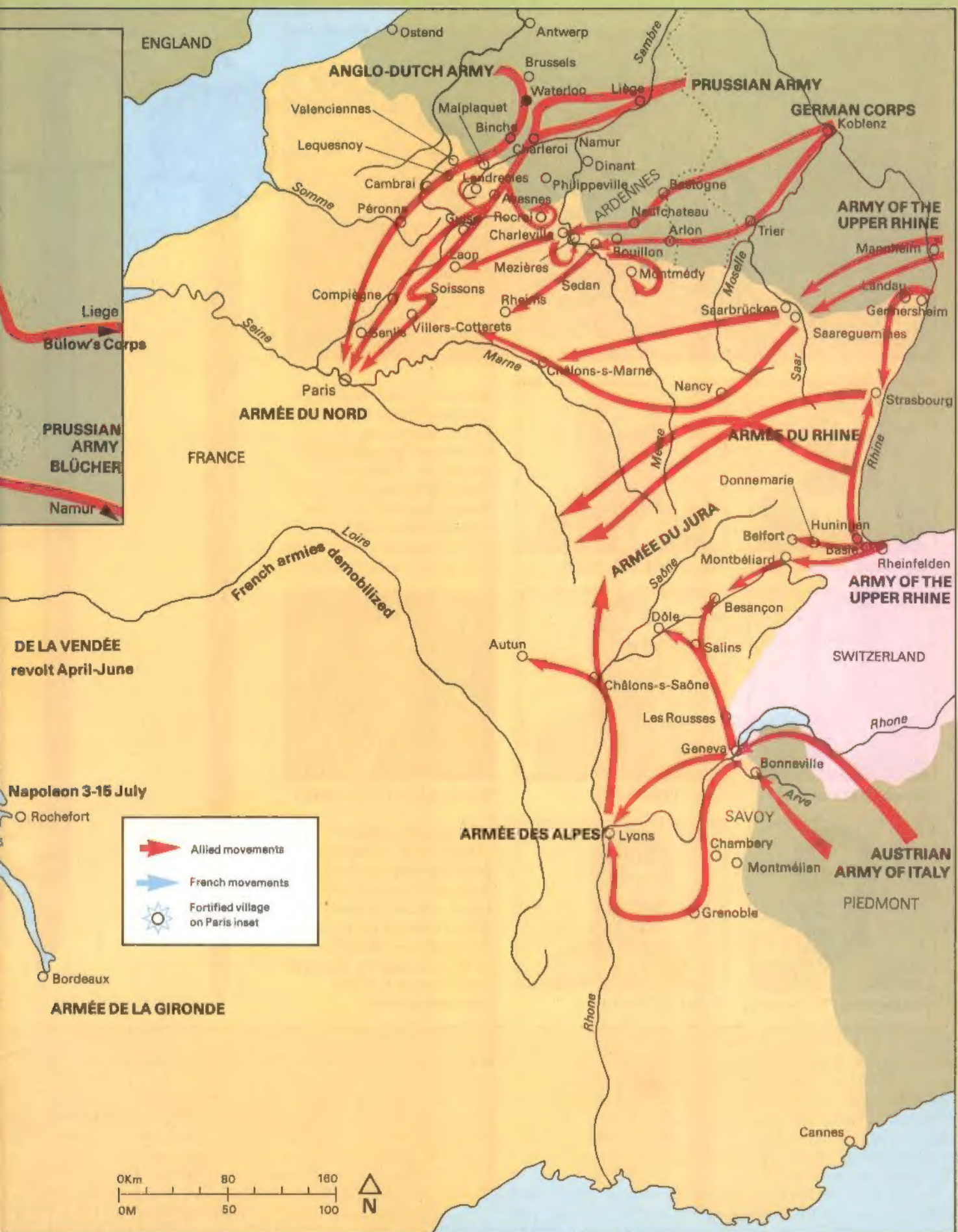
Cuirassiers appear 'like a thunderbolt'

The French, moreover, were still full of fight. On reaching Senlis the Prussians were attacked by Lt. Gen. François Etienne Kellermann's 1st Cuirassier Brigade, which appeared from the other side of the town at nightfall on 27 June like a thunderbolt. The Prussians counter-attacked, but Kellermann charged again and drove them across the market-place right out of the town before continuing his retreat. Shortly afterwards at the same place, d'Erlon's force and the advanced-guard of General Count Friedrich von Bülow's 4th Corps met head on, but the French came off badly and skirted the town and so continued towards Paris.

By now Blücher was so much on the flank of the French that he had every hope of cutting them off. On the 27th the Anglo-Dutch crossed the Somme. The same day the Prussians surprised the French at Villers-Cotterets, and took many prisoners, Grouchy himself barely escaping. The other side of the town he rallied 9,000 men and made a stand against a Prussian division which was forced to fall back when Vandamme's troops appeared from Soissons.

After extensive fighting the Prussians succeeded on the 28th in cutting off the French retreat along the Soissons high road, causing widespread confusion. Bülow's Corps was now within five miles of Paris, where the fearful







Parker Gallery/Luke Kelly



Napoleon (1769-1821)



Davout (1770-1823)

One of the brief, spectacular cavalry fights at Waterloo. Life Guards of the Household Brigade charge cuirassiers of Traver's French brigade, which was routed, one Life Gd. killed nine of his foes. But the devastating downhill charge cost 42 per cent casualties.



Grouchy (1766-1847)



Ney (1769-1815)



Wellington (1769-1852)

Mansell Collection



Vandamme (1770-1830)



Soult (1769-1851)

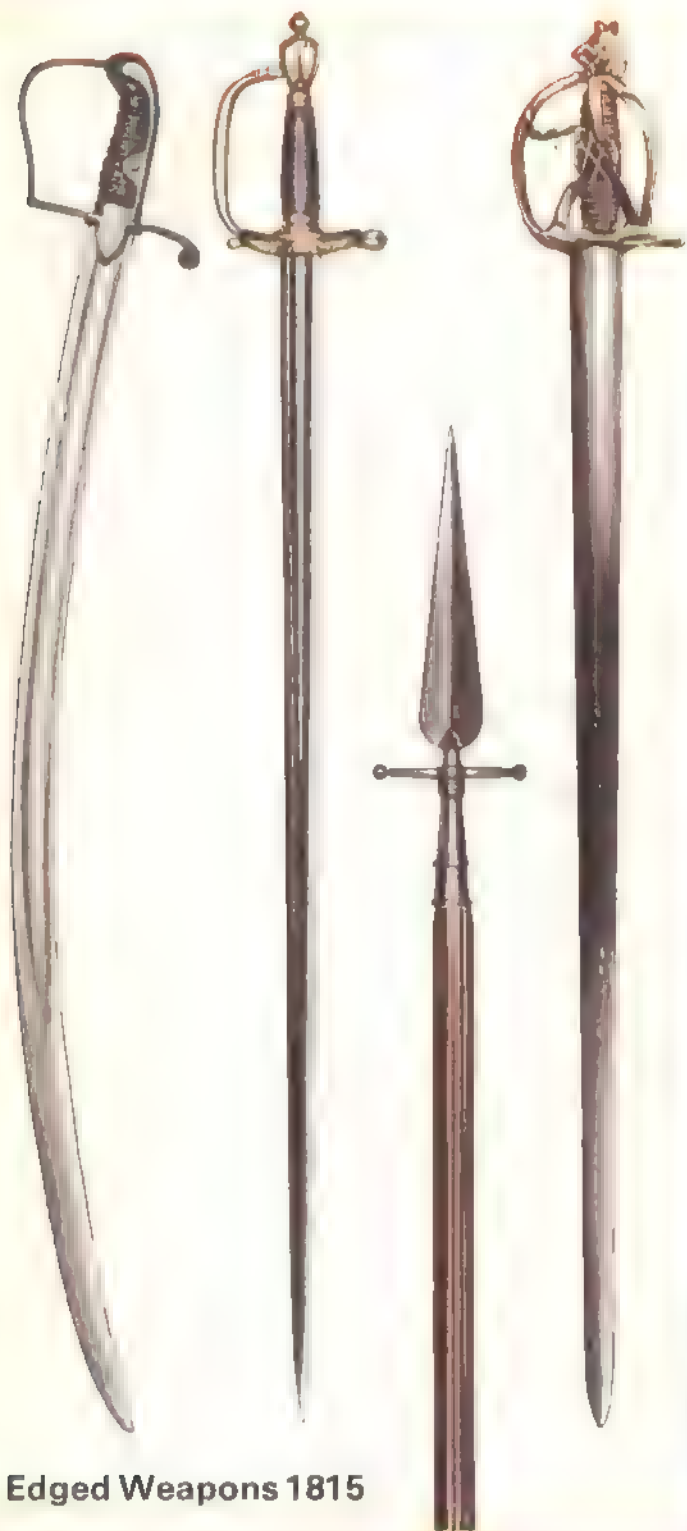
▷ *Edged weapons of 1815. (Left to right) a Scottish broadsword (claymore), heavy and light British cavalry sabres, infantry officer's sword (all three of 1796 pattern), British infantry sergeant's spontoon (pike), and a Russian cuirassier's sword.*



citizens could already hear the sound of the guns. On the north side fortified works had been thrown up since March. The Provisional Government, not for the first time, tried to negotiate an armistice and to persuade the Allies to allow Napoleon to leave for America, but neither Wellington nor Blücher would cease fighting until Paris was taken and Napoleon had surrendered.

On the 29th the Prussians began to invest the north side of Paris; Grouchy took up a position in front of them with 1st, 2nd and 6th Corps, while Vandamme marched straight

through the city with the remaining 8,000 men of 3rd and 4th Corps to take up a position on the south side. The Imperial Guard remained in reserve. Marshal Louis Nicolas Davout, as Minister at War, was now in overall command. He had at his disposal 60,000 to 70,000 men, including garrisons drawn from the Loire area, against perhaps 100,000 effective Anglo-Prussians. There were in addition 30,000 men of the Paris National Guard and no fewer than 300 heavy guns manned by 20 companies of marine artillery. St. Denis on the north side was heavily fortified



Edged Weapons 1815

Illustration by Malcolm McGregor

and an advanced line rested on the Ourcq Canal. Entrenchments were thrown up around the heights of Montmartre, Montfaucon and Belleville. The village of Aubervilliers was strengthened as was Vincennes; all boats on the Rivers Seine and Marne were moved to the left bank. On the south side Montrouge was fortified and the cavalry massed in the Bois de Boulogne.

Napoleon, seeing a chance to strike at the strung-out Allies, offered his services on 28 June to the government as an ordinary general, but was sternly rejected as the

principal obstacle to peace. On the 29th he left for Rochefort in an attempt to escape to America, only to give himself up to Captain Maitland of HMS *Bellerophon*. That night Bulow, supported by Ziethen, attacked Aubervilliers and drove 1,000 French out towards St. Denis. But it, and the Ourcq Canal were still strongly defended, so the Prussians started to cross the Seine farther downstream and to move round south of Paris, while the Anglo-Dutch took over in the north. As they moved out the French attacked and recaptured Aubervilliers. But on the afternoon of 1 July three light companies under Lieutenant Colonel Sir Neil Campbell of the 54th Foot, from 4th Division, were thrown into the village and retook it in what proved to be the last British action on the continent of Europe until August 1914. It was also the last British Army engagement in a worldwide war which had cost it 16,000 battle deaths since 1793, and, of these, 11 per cent were in the Waterloo campaign.

For Paris, the end was near

That same day Lieutenant Colonel von Sohr's two weak Prussian Hussar regiments, leading the encirclement of Paris, passed through Versailles, but were attacked outside by 3,000 cavalry (four regiments) under Lt. Gen. Count Remi Excelmans. Three more cavalry regiments and one of infantry had been skilfully placed to spring two successive ambushes on the exposed Prussian brigade. The 650-odd Prussians resisted the blocking force fiercely and then tried to fall back on St. Germain, only to be cut off three miles north of Versailles and annihilated in an heroic effort to fight their way out. The main Prussian army, however, was still moving round to the south, prompting the Imperial Guard to reinforce Vandamme on that side. At Sèvres Ziethen's Corps came up against opposition and at the village of Issy the French took up a position, which they could not maintain, and they withdrew into the city. The end was near, although Blücher and Wellington both declared themselves ready to make an assault. The French made two more sorties against Issy on 3 July and then decided to capitulate, agreeing to evacuate Paris and to withdraw south of the Loire in three days. On 7 July the victorious Allies entered the capital, followed the next day by the restored King Louis XVIII.

Wellington and Blücher between them had 'done the business' while the other Allied armies were still converging on Paris. In mid-April a 26,000-strong German Corps had assembled around Koblenz. They crossed the Rhine and took up a position on the Moselle and the Saar with their right in contact with Thielemann's Prussian Corps and their HQ at Trier. On 16 June, the day of Ligny and Quatre Bras, they advanced on Arlon in SE Belgium, and then began to move into France on 21 June by Bastogne, Neufchâteau and Bouillon. They captured the frontier fortresses of Sedan and Charleville, masked Montmédy, then struck west and took Rheims on 8 July, the day Louis XVIII entered Paris. Mezières, a fortress overlooking Charleville, capitulated on 1 September after a regular siege. Montmédy held out even longer—until 13 September. The Corps remained in the Ardennes until November, when it returned home.

To the left of it was the vast Army of the Upper Rhine under Austrian Field Marshal Prince Karl Philipp von Schwarzenberg. This army group included contingents from Austria, Bavaria, Wurtemberg, Saxony, Hesse-Darmstadt and the principalities; a total of seven Corps



Painter: Gallery Luke Kelly

Waterloo's most futile epic — the French afternoon cavalry attack on Wellington's center, formed in nine squares. Over 12,000 French horsemen made 12 charges during two hours, breaking not one square and carrying off not one cannon

and 254,000 men. The Wurttemberg and Bavarian armies crossed the Rhine first, between Gernersheim and Mannheim on 19 June. The Bavarians were supported by the advance of a 168,000-strong Russian army from Poland under Field Marshal Count Barclay de Tolly. The Rhine and Russian armies were originally intended to combine at Nancy at some time in July or August. But Schwarzenberg, who had laid the plan for a simultaneous invasion of France by all six allied armies on 1 July, set his troops in motion as soon as he heard of the fighting in Belgium.

The 57,000 Bavarians under Field Marshal Prince Karl Philipp Wrede crossed the Sarre on 23 June, in contact with the Russian advance-guard. The right-hand Bavarian column took Saarbrück after some opposition, and the left one captured Sarreguemines, which the Russians then occupied.

By 27 June the Bavarian advanced posts were at Nancy and had cut off General Comte Jean Rapp's *Armée du Rhin* in the Strasbourg area. On the 29th the Russians crossed the Moselle and on 3 July Lieutenant General Czernitschew's cavalry stormed and pillaged Châlons-sur-Marne, capturing General Rigault. The Bavarians were ordered to advance on Paris at the request of Blücher and Wellington; on 6 July they made contact with the Prussians.

Meanwhile, the Württemberg army was masking Landau and, in co-operation with the Bavarians, had bottled up Rapp. On 29 June Rapp's 24,000 men were forced back into Strasbourg by 43,000 Württembergers after a vicious action in which 5,000 men were casualties, and remained there until hostilities formally ceased on 24 July.

The 103,000 Austrians, constituting Schwarzenberg's left wing, crossed the Rhine to the south at Basle and Rheinfelden on 25 June and on the 26th invested Huningen. The bulk turned north to assist in the siege of Strasbourg while 24,000 men engaged 9,000 French before Belfort. On 28 June, the day of the Soissons fighting, the Austrians bombarded the fortress of Montbéliard, and bloodily stormed it, losing 1,025 men.

There was also extensive fighting on the Italian frontier. Shortly after Napoleon's escape from Elba, the King of Naples, formerly Marshal Joachim Murat, rose in the Emperor's cause and attacked the Papal States, only to be crushed by the Austrians in May before Napoleon could intervene. The Austrians then prepared to invade France with 60,000 men under General Baron Johann von Frimont. They faced the 24,000-strong *Armée des Alpes* under Marshal Louis Gabriel Suchet in the region of Grenoble and Chambery. Frimont divided his army into two corps. One under Field Marshal Radivojevič advanced towards Lyons, and the other, under General Count Ferdinand von Bubna, invaded S. France through Savoy. On 15 June, the day Napoleon entered Belgium, Suchet marched to secure the mountain passes between Montmélian and Geneva, which he blockaded. He then moved forward to meet Radivojevič's Corps, but was driven back along Lake Geneva. Count Bubna crossing Mount Cenis had meanwhile taken Conflans. Radivojevič then forced the River Arve, despite resistance at Bonneville, and on the 29th took the Pass of Les Rousses in the Jura Mountains so forcing the French to retreat. The Reserve Corps under Field-Marshal Meerville crossed the Rhone to the west, and by early July the road to Lyons was open. On 9 July a Sardinian detachment from Bubna's Corps captured Grenoble exactly four months since Napoleon had left it in triumph. On 11 July Bubna forced Suchet to evacuate Lyons, while the other two Corps marched northwards and took Châlons-sur-Saône, Salins and Dôle, finally linking up with the Army of the Upper Rhine at Besançon.

'You must inundate France with force in all directions' the British Foreign Secretary had urged Wellington in March; by late July almost 700,000 Allied troops had poured into France, more than double the number Napoleon had been able to mobilize. Within four weeks of Napoleon's offensive the Allied armies had made any continuation of French resistance futile; but it was Waterloo that made invasion the consolidation and not the prelude of victory.

Richard Hunter

KHALKHIN-GOL 1939

Hand-picked by Stalin, a ruthless general rushes the Soviet army to crush the ambition of Imperial Japan to occupy the Soviet East



A misleading picture of Japanese tank strength. A company of Type 89 medium tanks roll across the Mongolian plain on 21 July, two days before their second offensive. Only 6,450 Japanese tanks were built during 1931-45, half by Mitsubishi.

Lieutenant General M. Komatsubara's 23rd Infantry Division had been destroyed utterly—scarcely one man in a hundred escaping—on the empty borderlands of the Khalkhin-Gol river between Outer Mongolia and Manchuria. It was late in 1939, while half a world away Poland bled from the new German *Drang nach Osten* ('Drive to the East') and the Western democracies indulged themselves in the 'Phoney War' along the new Siegfried Line, a lonely and disgraced officer of Imperial Japan brought his life to a private end. Komatsubara might now find redemption in the agonizing rite of *seppuku*: only by ripping out his own entrails with his own short sword might he 'prove his sincerity' to the Emperor and his ancestors. But the Khalkhin-Gol disaster was too great to be atoned for by a general's suicide. It was better that it had not happened at all, and the less attention drawn to it the better. Komatsubara, announced Tokyo inscrutably, had died of 'an abdominal ailment.'

The empty steppe country around the Khalkhin-Gol river had represented the farthest fringe of Japanese expansion. China, invaded in 1937, was still unsubdued but the Imperial grip on Manchuria, annexed in 1931, was firm. Here, in the wilderness of the Mongolian Republic, might Soviet strength be tested. Thirty-five years before, Japan's crushing defeat of the old Tsarist armies had astounded the world; now perhaps, a border pinprick might develop into a deep thrust at the Trans-Siberian Railway, severing Russia's spinal column and allowing the rich Soviet Far East with its port of Vladivostok to fall into the lap of the Emperor.

For years, Japan's highest military councils had been divided into factions advocating either a 'Strike North'—at Russia, or 'Strike South'—at the western colonies. Emperor Hirohito had already decided upon 'Strike South', which would in the next few years lead to Pearl Harbor, the fall of Singapore, and ultimately Hiroshima. But in the

Army many officers still hankered after an attack on Russia and the High Command of the Kwantung Army in Manchuria was no exception.

'Border incidents' spanning July-August 1938 at Lake Khasan, near Vladivostok, had shown real Soviet weakness after Stalin's terrifying purges of the Red Army. A Russian general, Lyushkov, had defected to the Kwantung Army with details of dispositions and stores of discontent. Acting first without Hirohito's knowledge, and eventually in direct disobedience, the Kwantung command launched an attack on the Russian forces which met with some success until it ran up against superior Soviet armor and airpower. Enraged, Hirohito refused to allow his airforce to fly in support of his own disobedient army, and the situation was eventually settled by a diplomatic return to the *status quo*. But to save his officers from a catastrophic loss of face, the constant problem of the Japanese Imperial regime, he had to let them try again. After a formal ceasefire had been agreed at Lake Khasan, Hirohito approved a General Staff plan for an organized trial of strength farther west, in Mongolia, during the following summer.

The border area chosen by the Japanese staff was beside the Khalkhin-Gol river, for much of its length a frontier between Japanese-occupied Manchuria or Manchukuo to the east and the Outer Mongolian People's Republic, closely bound to Russia by a mutual-assistance pact in March 1936, to the west. At one point, however, the border bulges east of the river around the village and hill of Nomonhan. On this shallow salient, 46 miles wide, the Japanese planned to test the Soviet pledge to defend Mongolia. The country was steppe, blue-green in the summer with sturdy grass, and populated only by a few tribal herdsmen. East of the river it was more broken, with gullies, dunes, and even a few quicksands.

On 11 May 1939, a few hundred Inner Mongolian horsemen under Japanese control and accompanied by 'ad-



1 BT5 tanks lead a Red advance, July 1939. 2 Japanese soldiers yield to the Russians near the Khalkhin-Gol. 3 (Right to left): Nikishev, Commissar to Soviet 57th Special Corps; Choibalsan, C-in-C, Mongolian People's Army; Ivanov, Ambassador to Mongolia; Zhukov, Corps Commander. His 1945 comment on Khalkhin-Gol: 'Japanese are not good against armor, it took 10 days to beat them.' 4 Japanese infantry 40 miles from the front.

Novosti



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visers' from Komatsubara's 23rd Division, crossed the frontier and rode as far as Nomonhan itself before the villagers alerted their border guards, based in a log fort five miles away on the west bank of the river. The following day, the invaders were driven back across the border in an action that resembled an ancient tribal feud rather than a clash between two twentieth-century super powers: whooping Tskirik horsemen riding rings around their Japanese-led Bargut enemies.

But on 14 May the Inner Mongolians reappeared in strength, and this time they had 300 Japanese cavalry as stiffening. Within a few hours the Tsiriks had been driven back to their garrison positions, and that night the local Russian adviser, Major Bykov, was called in. When he reached the picturesque border fort next morning, he found that the twentieth century had arrived at last in the shape of a Japanese air raid which terrified his Mongolian charges and left the place a ruin. Taking no chances, Bykov at once called in 6th Mongolian Cavalry Division and the few Red Army detachments available. But as these troops massed on the Mongolian side of the Khalkhin-Gol, the Japanese on the east bank melted away. On the night of 22 May, Bykov made a cautious reconnaissance

in force across the river. In the quiet rough pasture of Nomonhan the Japanese were waiting. Only after fierce hand-to-hand fighting was Bykov able to fall back to the Khalkhin-Gol.

The game of cat-and-mouse continued. On 25 May Bykov cautiously moved his full strength forward and over the next two days cleared the east bank and reoccupied the deserted village of Nomonhan. By now, about 10,000 men had been involved on the Mongolian side, mainly 'constabulary' troops with a few specialist Russian companies. The border incident was rapidly escalating, and at dawn on 28 May it went a stage further. Five thousand Japanese regulars, with an accompanying tribal horde, fell on Bykov's troops before daybreak. Only the veteran Russian's canny dispositions enabled him to fall back once more to the river without complete destruction. But the panic button had already been pressed in Moscow and that same evening troops of the Soviet 149th Motorized Infantry Regiment began to arrive, to be sent straight into the fight from their trucks. All that night the battle continued, and the following morning a Soviet-Mongolian counter-attack pushed the Japanese back, once more, to the border with a loss of 400 men.



Zhukov was to direct forces and fighting of unsurpassed dimensions in the Russo-German war; 1941 would see him halt Hitler's offensive outside Moscow, 1942 mastermind the Stalingrad campaign, and in 1945 he would meet the Western Allies in the wreckage of Berlin as the epitome of the ruthless, crushing might of the Soviet war machine. But in June 1939, as he flew out with a small staff to Mongolia, his future career and quite possibly his life depended on victory at Khalkhin-Gol. And victory alone would not be enough. Only the utter destruction of the Japanese would satisfy Stalin.

On 5 June Zhukov arrived at HQ, Soviet 57th Special Corps, the only major Red Army formation in the area. There he found little cheer. The command was hopelessly out of touch with the front, there was not so much as a kilometer of telegraph wire in the area, co-ordination of troops was poor and reconnaissance, though inadequate, clearly showed a Japanese build-up far greater than any mere border conflict would require. Furthermore the Japanese were making full use of air superiority, both for bombing and reconnaissance. Zhukov, with papers in his pocket appointing him local C-in-C if need be, at once took charge. The Corps commander was relieved and sent home and Zhukov threw all his characteristic energies into organizing a defense.

The Japanese strategy

By early July, the Japanese had about 38,000 men, 135 tanks and 225 aircraft concentrated on the frontier east of the Khalkhin-Gol. Soviet and Mongolian forces together amounted to only 12,500 men, though Zhukov had 186 better tanks and 226 armored cars. He would need them. The Japanese plan involved sending a strong force wide around the Soviet left flank, across the river to seize the dominating high ground of Mount Bain-Tsagan. Then, as the main tank-led force attacked along the general front, this outflanking force would surround and destroy the east bank salient from its rear.

According to the Japanese schedule, offensive operations would be over by mid-July and the campaign wound up before the autumn rains. On 2 July, the first attacks pressed into the weak east bank positions and by the end of the day Japanese tanks and infantry were on the river in the Russian third line at some points. But Zhukov was too shrewd a commander to commit his reserves prematurely. Shortly before dawn on 3 July, the Soviet Colonel I. M. Afonin, Chief Adviser to the Mongolian Army, was inspecting Mongolian 6th Cavalry Division defenses on Bain-Tsagin when he stumbled upon Japanese troops who had made a surprise river-crossing by pontoon bridge. The Mongolians, without the training or equipment of their Red Army mentors, were driven off.

As the sun rose the following morning, Zhukov could not fail to appreciate the danger of the situation. The Japanese only had to roll on to the south for the hard-pressed Soviet forces on the east bank to be completely cut off. At once he ordered his armor—practically his only reserve—into action; 11th Tank Brigade was to attack from the north, 7th Mechanized Brigade from the south, and 24th Motorized Infantry Regiment from the NW, through the retreating Mongolians. These forces together deployed over 300 fighting vehicles: the Japanese, on both sides of the river, had less than half that. Zhukov wrote in his 1969 memoirs: 'It was impossible to delay a counterblow since the enemy, who saw the advance of our tanks, rapidly began to take

Associated Press

By now, Moscow was feeling real alarm. Despite accurate intelligence from his master spy Richard Sorge in Tokyo on long-term Japanese planning, Stalin understandably feared the possibility of a disastrous two-front war with Japan and Germany. Accordingly, no effort was to be spared in crushing this Japanese 'adventure' before it threatened all of the Soviet Trans-Baikal. The first step was to release troops from the interior for the mission, and the second was to appoint a commander, someone new, outstanding, trusted, and with a fighting reputation to make. The man Stalin picked was Corps Commander Georgi Konstantinovich Zhukov.

Zhukov in 1939 was a tough, 43-year-old cavalryman turned 'tankist' and Deputy Commander of the key Belorussian Military District. Squat, barrel-chested, heavy-browed (his name came from the Russian word *zhuk*, meaning 'beetle') he had fought his way up from the ranks of the Red Army in the Civil War to distinction in every peacetime command he had held. He had been in China, perhaps in Spain; he had survived the bloodletting of the 1937 purges unscathed and was already well-known in the Red Army for his short-tempered, no-nonsense thoroughness. As 'the general who never lost a battle'

defensive measures and started bombing our tank columns. The latter had no shelter whatsoever: for hundreds of kilometres around there was not even a bush in sight.'

The speed of the triple-pronged Soviet thrust first startled, then demoralized the Japanese. From 0700 Zhukov's entire bomber force had been pounding them, and for the first time they felt the weight of the brilliantly organized Russian heavy artillery. By 0900 the advance detachments of Russian armor were arriving in the combat area and at 1045 the full attack went in. The Japanese had had little time to dig in thoroughly; their anti-tank training had always been a weak spot and now they paid the penalty. As the battle raged all that day, it was no longer the Russians who were in danger of encirclement.

An attempt at counter-attack on 4 July was broken up by Red Army aviation and artillery; worse, the single pontoon bridge they had laid across the Khaikhin-Gol was destroyed by Russian bombs. Hundreds of soldiers drowned trying to escape, and Komatsubara was lucky to get across with his HQ. Most of the 10,000-strong Bain-Tsagan assault force lay dead and wounded on the slopes of the little mountain, and when the heaviest fighting ended, on the night of 4-5 July, the Japanese had little cause to celebrate having lost half the tanks available in Manchuria. And though Soviet 3 July tank losses had been over a hundred, the Red Army had successfully exploited glaring Japanese deficiencies in field and AT artillery.

But the Kwantung Army was by no means willing to abandon its Mongolian campaign. During the remainder of July, it doubled the force committed: stripping divisions elsewhere of AT units to strengthen the Khaikhin-Gol positions. On 10 August, two full Japanese infantry divisions (7th and 23rd), a Manchukuoan brigade, three cavalry regiments, 182 tanks, 300 armored cars and three artillery regiments with over 450 aircraft were combined into the 75,000-strong Sixth Japanese Army under General Ogisu Rippo. A final general offensive along a 43 mile front was planned for 24 August, after an attack on 23 July got nowhere under Soviet bombardment.

On the Russian side of the hill final victory was far from certain. Powerful reinforcements had to be brought over

poor communications from the Soviet heartland. But Stalin knew that Soviet international prestige was at stake and his new negotiations with Hitler, no respecter of weakness, had reached a critical juncture. Neither blood nor treasure would be spared. 'For Stalin,' wrote one former Red officer, 'the losses were of no importance whatsoever'.

Throughout July and August three infantry and two cavalry divisions with seven independent brigades, including five armored, as well as artillery and airforce units, were assembled. This was in itself no mean feat. The Japanese, in the year before their attack, had built a railway to within a few miles of the Mongolian border. The nearest Russian railhead from which the new First Army Group could be supplied was 403 miles away. For Zhukov's coming offensive, 55,000 tons of supplies, including 18,000 tons of artillery ammunition, had to be carried along rudimentary Mongolian roads, the overworked trucks and drivers further tormented by late summer heat and the piercing dust storms of Central Asia. Such was the shortage of trucks that gun-towing tractors from the front had to be pressed into service as supply carriers.

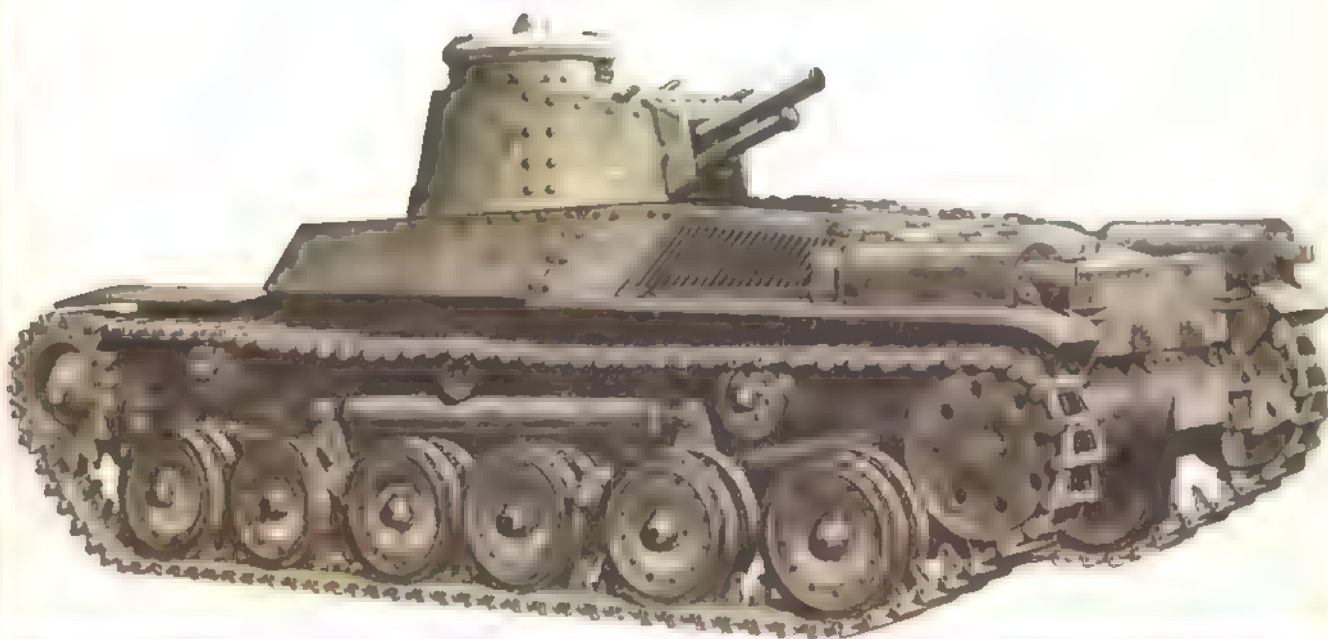
So Zhukov laid his plans. The Japanese had attempted a great envelopment; very well, Zhukov would show them how it was done. He organized his new forces into three groups, North, South and Central, with his armored units, ready to move fast and deep, on the wings. He would be ready by 20 August, four days before the enemy. Until then he kept his plans, his troop movements, and thus his future surprise well masked by painstaking and ingenious deceptions. Fake radio signals ordering large quantities of engineering equipment misled the Japanese into thinking the Russians were digging in for the autumn. Sound effects gave the impression of heavy pile-driving work. The night movements of armored and motorized units were covered by air and artillery bombardments. All day a few tanks stripped of their silencers drove up and down until the Japanese got used to the noise. Zhukov evenly solemnly issued to his troops the official handbook 'What the Soviet Soldier Must Know in the Defence'. By Sunday 20 August, unknown to the Japanese, quietly



◁ Soviet armor in Mongolia, July 1939. BT (Bystrochodya Tank = 'fast tank') 7s and 5s are visible. Fire-prone though they were and with too many apertures for the Japanese infantry's Molotov cocktails (wire nets and diesel fuel were remedies), their speed and firepower were fully utilised. The brigade commander on the right may be Hero of the Soviet Union M. Y. Yakovlev (11th Tank Bde., 150 tanks). We are grateful to Messrs. Jonathan Cape Ltd. (London) and Seymour Lawrence Inc. (Boston) for permission to quote certain extracts from 'The Memoirs of Marshal Zhukov', trans. by Novosti.

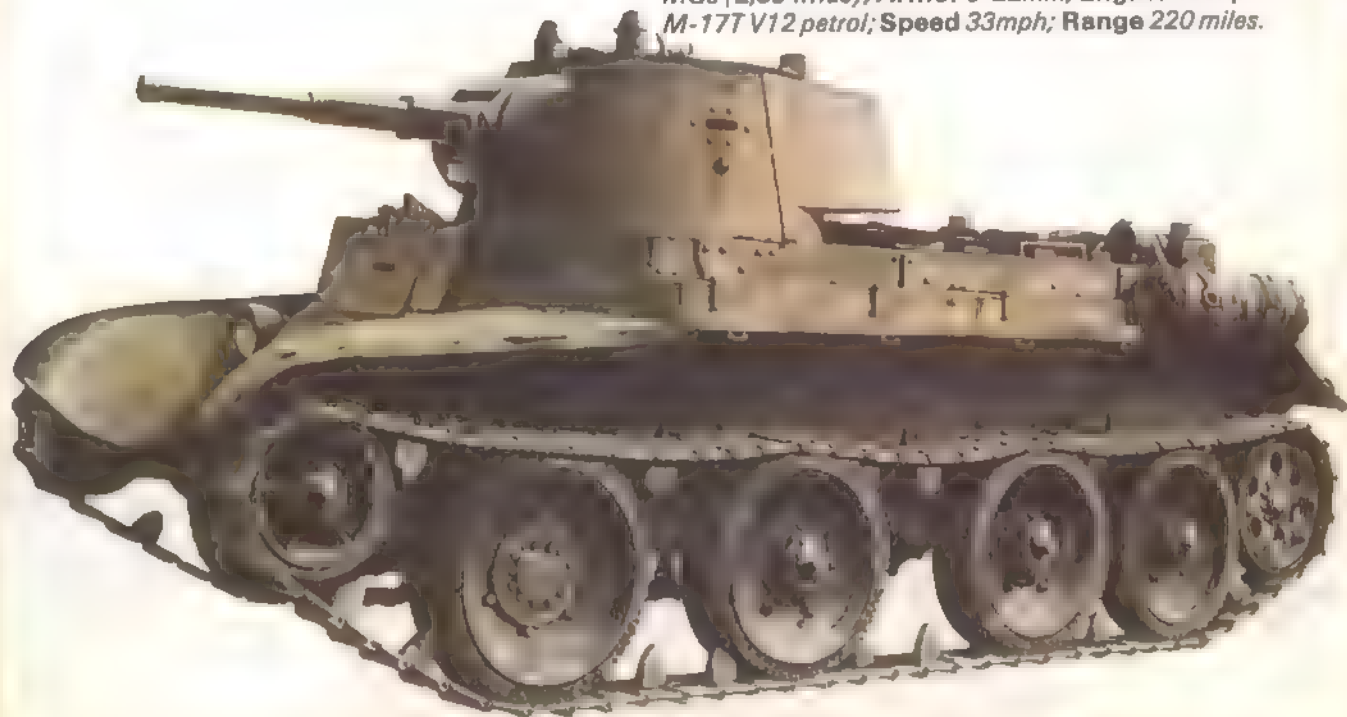
**Japanese Type 97
(1937) Medium Tank**

The best Japanese tank on the Khalkhin-Gol, more than a match for the Russian BT types, but there were too few. Weight 15 tons; Length 18ft 2in; Crew 4; Armament Type 97 57mm gun (114rnds) and 2 7.7mm MGs (4,035rnds); Armor 8-25mm; Engine 170hp Mitsubishi V12 air-cooled diesel; Speed 25mph; Range 150 miles



**Russian BT7
Medium Tank**

Along with the earlier but similar BT5 this type made up the bulk of the 500 Soviet tanks at Khalkhin-Gol. Weight 13.8 tons; Length 18ft 7½in; Crew 3; Armament M1932 45mm gun (172rnds) and 2 7.62mm MGs (2,394rnds); Armor 6-22mm; Engine 450hp M-17T V12 petrol; Speed 33mph; Range 220 miles.



waiting in the jump-off positions were 35 infantry battalions, 20 cavalry squadrons, 498 tanks, 346 armored cars and 502 guns of all types.

The first the Japanese knew of the coming storm was at 0545 when 150 bombers, escorted by 100 fighters, launched a saturation raid on their forward defenses and artillery positions. Before the stunned Japanese had recovered, Zhukov's 250 heavy guns and mortars were playing on their close reserves and at 0845 his yelling infantry were surging forward behind the tanks. All along the front, the Russian waves broke through the Japanese front. The defenders were 'morally and physically suppressed' by the three-hour Red Army artillery bombardment, delivered by twice the number of defending guns which anyhow lacked the wealth of Russian ammunition.

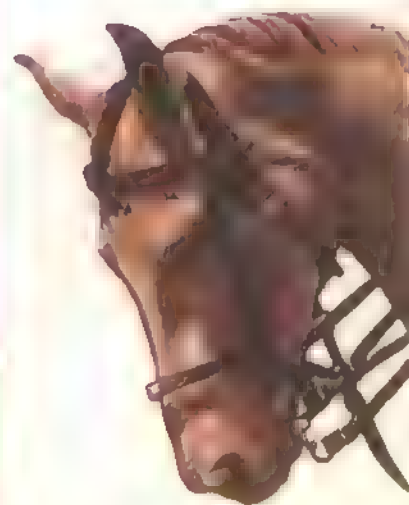
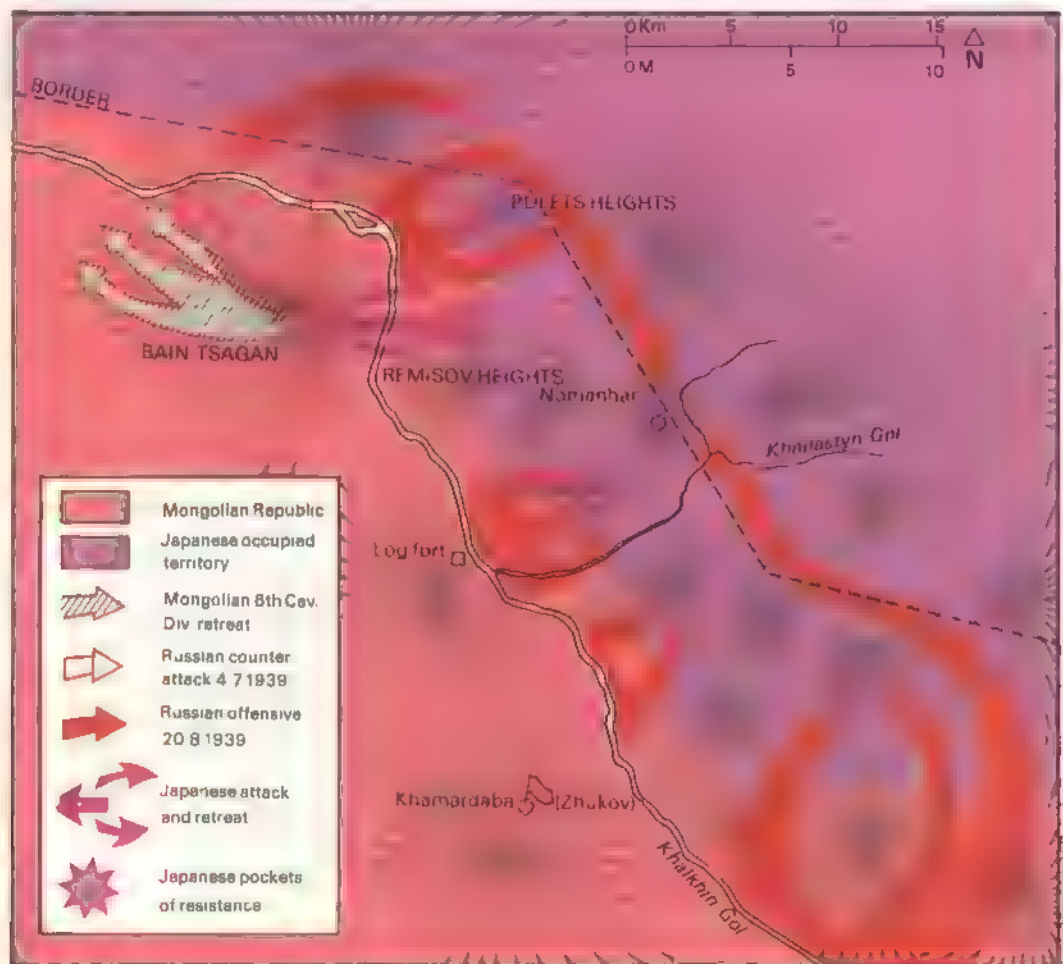
Not that the Japanese crumbled easily. At one point a divisional attack on Japanese fortifications was bloodily repulsed and the division, probably the raw 82nd Infantry sent from the Urals, pinned down under heavy fire. Its commander begged Zhukov for new orders; Zhukov told him to continue his attack. When the divisional commander doubted the possibility, Zhukov said coldly: 'I hereby relieve you of command. Give me your Chief of Staff'. The Chief of Staff agreed to continue the attack, but the attack failed to materialize. Zhukov picked up the telephone once more: 'I hereby relieve you of your command. Wait for the arrival of a new commander'. An officer from Zhukov's own staff was sent over, and with reorganized artillery and air support, the attack succeeded despite appalling losses.

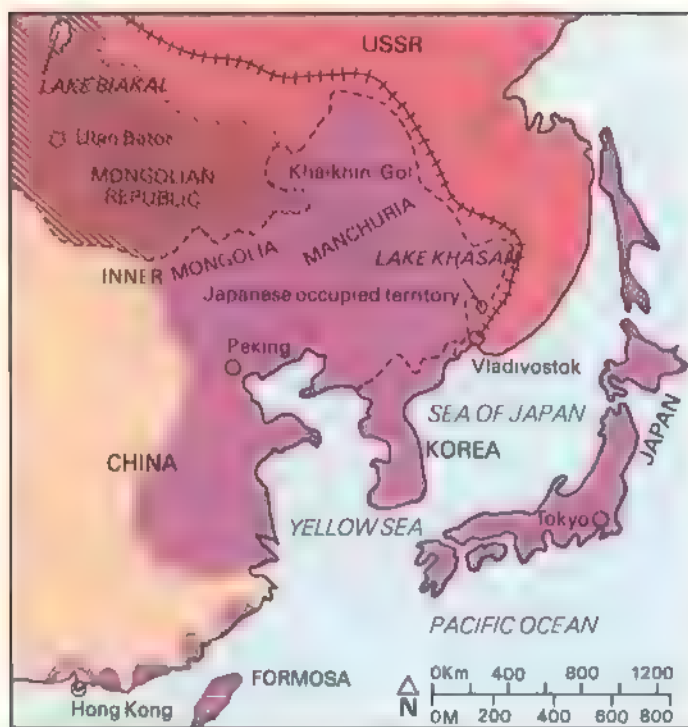
Most successful was Zhukov's Southern group. Its powerful armored forces, which included a battalion of

SP guns and a company of flamethrower tanks, swept clear around the left and by 21 August were solidly established behind the Japanese operating south of the Khalhin-Gol's east-west tributary, the Khailastyn-Gol. Two days later the Northern group, assisted by Zhukov's reserve 212th Airborne Brigade (fighting on the ground) cut its way across the Palets Heights round to join them, and the enemy were surrounded. The fighting was bitter and by no means over. Japanese in dugouts had to be burned out by the flame-throwing tanks, and surrenders were rare. But the Red Army too had a determination which took a heavy toll of 600 dead in the savage hand-to-hand fighting in the dugouts and gullies of the Palets Heights as the pincers of encirclement closed.

After a Japanese relief attempt had been beaten off by 6th Tank Brigade on 26 August all hope for the trapped troops was gone. The growing Russian air superiority alone was enough to prevent the movement of fresh Japanese troops into the battle zone. In the first week the Soviet Air Force flew 474 sorties and dropped 190 tons of bombs, modest by later standards but some of the most intense air fighting since 1918. In the dogfights of the first day five Polikarpov 116 fighters shot down two Mitsubishi A5M fighters with 82mm RS82 rockets—the first likely instance of air-to-air rockets being lethal against aircraft.

But neither Zhukov nor his government were content with a passive containment. With bloody impatience, he set about planning the liquidation of Japanese units trapped on various patches of high ground within the perimeter. For a week the savage business of 'mopping up' went on. In this phase too, Zhukov demonstrated his





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△ Even while fighting deep in China, Japan twice tested the Soviet Union in carefully contrived border clashes at Lake Khasan (1938) and on the Khalkhin-Gol (1939).

◁△ The July-August battles over a rare and therefore prized Mongolian river, 130/140 yards wide, 6½ ft deep, 2mph flow.

▽ A Russian cavalry section commander of 1939. He is armed with sabre (shashka) and M1938 7.62mm carbine. There were five Red Army cavalry divisions in the Soviet Far East in May 1939. Mongolia fielded eight cavalry divisions.



Malcolm MacGregor

tactical skill and the technical superiority of his army. Japanese troops on the Remizov Heights had relied on the muddy bottom of the shallow Khailastyn-Gol to protect their southern flank from attack. But by night Zhukov's engineers reinforced the river bed and the tanks with their terrifying flamethrowers drove straight across, as one of the three converging assaults on the last pocket of resistance

By the morning of 31 August, any Japanese remaining on Mongolian territory were either dead or prisoners. Of 60,000 troops trapped in the cauldron, 50,000 were later listed as killed, wounded and missing. Casualties in the veteran 23rd Division ran as high as 99 per cent. The Russians admitted casualties of 10,000 in killed and wounded throughout the campaign, but it seems likely that this was a considerable underestimate. The outnumbered Japanese Army Air Force claimed to have downed 1,200 Soviet planes (the Russian figure for their 'kills' was 660) in the four months of hostilities, but in the days before instant close-support on the battlefield this could not sway the ground-fighting.

Now, on the last day in August, Zhukov's dog-tired, grimy tank crews stared east from the border they had regained, waiting for the order to go on, while the frantic Kwantung Army HQ scraped the depots of Manchuria to find troops to stem what many feared would be a Red flood.

That order never came. In that autumn of 1939, Moscow and the world had other, more urgent problems. On the day Zhukov's pincers met behind the Japanese, Stalin and Hitler had published their Non-Aggression Pact: the Soviet dictator now believed, with unusual trustfulness, that he had bought the time he needed to prepare Russia against war. On 1 September the German *Panzers* rolled into Poland and within a few days the victorious Soviet armor was rattling back across the Trans-Siberian Railway to the new Soviet frontier in Eastern Poland—just in case.

Prime Minister resigned in shame

Hirohito had to face up to more than the shock of military disaster. The Non-Aggression Pact surprised no one more than the Japanese, to whom it was a baffling breach of faith. The Prime Minister resigned in shame. Hirohito would have been more than just puzzled and disappointed had he heard Hitler ranting to his generals a few days before, 'The Japanese Emperor . . . is weak, cowardly, and irresolute . . . Let us think of ourselves as masters and consider these people at best as lacquered half-monkeys, who need to feel the knout.' To Hitler, the Japanese defeat was no surprise. But thanks to Khalkhin-Gol, the confidence he had in his invasion of Russia was not shared by the Japanese.

Hirohito was on his own. Yet that was not entirely unsatisfactory. The 'Strike-North' army faction was discredited at last. The Kwantung Army begged to be allowed one more offensive to save its face, but this time the Emperor was firm. In Moscow once more, the diplomats took over, and once more the *status quo* was resumed. A cease-fire was signed on 15 September. In April 1941, a Russo-Japanese Non-Aggression Pact was signed. The Soviet Far East remained safe from Japanese Imperial ambition, and throughout the coming war with Germany, American ships under Soviet flag would sail unhindered from United States arsenals to Vladivostok. Japan would strike south.

Alan Lothian



SOPWITH CAMEL

A pug-nosed, vicious little killer with a reputation that combined real affection with undiluted hate

Ask anyone to name just three aircraft of World War I and almost invariably their answer will include the pug-nosed, vicious little killer with oddly benign-sounding name 'Sopwith Camel'. Justifiably its reputation as the outstanding fighter of the world's first aerial war has continued to the present day. During the past 50 years research has confirmed the Camel as the supreme fighter aircraft of World War I responsible for more victories than any other aircraft in that bloody conflict. And it was a Camel which held the unchallenged individual record of enemy aircraft

destroyed by a single machine.

Inevitably its reputation is a mixture of affection and undiluted hate by those men who knew it best—the Camel pilots. Thoroughly unstable—with a will of its own—the Camel's greatest combat asset was lightning maneuverability. The machine was an acquired taste for pilots. Its ability to change direction at the mere flick of a wrist gave it the uncertain qualities of a will-o'-the-wisp. To those who mastered the idiosyncracies of this waspish-tempered little biplane it remained the finest pure combat machine of its



Major W. G. Barker, DSO, MC, C/O of 139 Sqdn, in his F1 Camel over Villaverla airfield, Italy.

1 T. O. M. Sopwith at Brooklands airfield, 1910.

2 The drab 'Comic' of Patrol Leader Captain G. S. M. Insall, VC, MC, of 51 (Home Defence) Sqdn. The twin Lewis MGs sited above the center-section prevented muzzle-flash blinding the pilot at night.

3 Top killer himself, Maj W. G. Barker with his Camel B6313 in Italy, July 1918.

4 Sopwith F1 first prototype, Brooklands, Dec 1916. Note sloping guns housing and one-piece top wing (no center-section cut-out).

day. In the succinct words of one noted Camel pilot: 'She left you with three choices—Victoria Cross, Red Cross—Wooden Cross....'

On 22 December 1916 the first Sopwith F1 Scout (the Camel's official designation) was rolled out onto the snow-covered grass of Brooklands aerodrome, Weybridge, Surrey, prior to air-testing by the Sopwith Company's chief test pilot, Harry G. Hawker. It was no 'inspired' design but simply a natural progression of ideas from the company's highly successful Sopwith Pup Scout. Its simplicity of line

and functionally compact lay-out were both a parallel to the delightful Pup. But whereas the Pup endeared itself to hundreds of pilots for its gentle, tractable flying manners, the Camel was rough, tough and broad-shouldered—strictly a war weapon.

Initially, power was provided by a 110hp Clerget 9z rotary engine. The Camel's main masses were concentrated around the snug cockpit. This resulted in extremes in torque effect—the tendency for a machine to roll away sharply from the spin direction of its rotating engine. To a tyro coming straight from slow, 'soft-mouthed' trainers, the viciousness of a Camel's resulting spin was often fatal, yet paradoxically this same characteristic was a life-saver in the heat of battle. A Camel could not be flown 'hands-off', it needed positive control from the moment of take-off until the final landing run; yet few other planes of the period achieved the feeling in pilots of complete affinity with their 'steed'. As several ex-Camel pilots have remarked: 'One felt as though the wings grew from one's shoulder blades. Merely think about doing a turn and the Camel did it....'

Just after Christmas Day 1916, Harry Hawker began flight-testing the F1 prototype and his reports were enthusiastic, particularly about the machine's control sensitivity.

Its two .303in Vickers guns armament pioneered the side-by-side installation in British fighters—a classic armament lay-out originally introduced by the German Albatros D1 which became standard in universal fighter designs for the next 20 years. Three further Camel prototypes were built early in 1917, each experimenting with new wing shapes, modified armament housings and different wing strutting, but the basic F1 design was soon put into production with only minor modifications. Parallel with F1 production was development of a further modified Camel, officially designated 2F1—a form of F1 adapted for naval use and usually fitted with differing armament of one Vickers gun on the forward fuselage and a Lewis gun canted to fire upwards through, or over, the top wing center-section.

As production of the F1 got into full swing, the first service examples were delivered to combat units in France. Number Four Squadron RNAS, based at Dunkirk, received its initial issue in late May 1917. The first recorded Camel air combat came on 4 June, when Flight Commander Alexander Shook, piloting N6347, attacked an enemy machine some 15 miles off Nieuport but failed to score a positive victory. On the following day, still flying N6347, Shook tackled a large formation of enemy aircraft between Nieuport and Ostend and sent one scout down to crash on the beach. It was the first confirmed victory for a Camel—the start of a prodigious fighting career. In the same month the first RFC unit to begin to re-equip with Camels was 70 Squadron, which began exchanging its war-weary Sopwith 1½ Strutter two-seaters for the new fighters at Flenvillers. On 27 June Captain Clive Collett, flying B3756, scored 70's—and the RFC's—first Camel kill.

In July 1917 Camels re-equipped 6 and 9 Squadrons, RNAS, and 45 Squadron RFC. In September four more RFC units received a full complement of Camels, and a fourth RNAS unit, the so-called RNAS Seaplane Squadron at St Pol, became a Camel unit as the nucleus of the later 13 (N) Squadron.

Camels as bombers

September 1917 also saw the first use of Camels as light bombers when, on the 19th, machines from 70 Squadron RFC and 9(N) Squadron were sent out to strafe and bomb German ground positions along the Ypres front. This was in tactical support of the land operations—known as the Third Battle of Ypres. Their individual loads comprised just four 20-25lb bombs attached under the fuselage, but the shattering effect of their guns and bombs was devastating to the German troops in the trenches. It was a role in which many Camels were to excel in future operations.

Meanwhile, as further Camel units were raised or re-equipped, three RFC squadrons—28, 45 and 66—were hastily despatched in late November 1917 to the Italian front—part of an Allied 'bolstering' operation for the faltering Italian armies being outfought by Austro-Hungarian forces. Despite the 'loss' of those three, a total of 13 squadrons were operational with Camels on the Western Front by February 1918, and more were in the process of working up to combat status.

By the summer of 1917 the depredations of Zeppelin and aircraft bombing raids on England had created a growing aerial defense organization. However, the ever-increasing needs of the fighting zones abroad, in terms of the latest aircraft designs, precluded equipment of most Home Defence squadrons with first-line aircraft. Number 44 Squadron, based at Hainault Farm, Essex, began equipment

with a few Camels in August 1917. And on 3 September the squadron commander, Major Murlis Green DSO, MC, obtained permission to attempt a night sortie. In company with Captain C. J. Quintin Brand and Lieutenant C. C. Banks, Green led the three Camels into the night skies and all three eventually landed safely—thereby nullifying the current theory that Camels were 'too tricky' to fly in the dark. The effect of this pioneering Camel night sortie was immediate in other Home Defence units. Captain Cecil Lewis MC, at that time newly arrived at 44 Squadron, commented: 'The next morning a feverish activity pervaded the squadron. Tenders rushed off to Aircraft Depots and returned with instrument-lighting installations which were hurriedly fitted to the machines. All pilots were instructed to make practice night landings, and in 24 hours the Home Defence squadrons ceased to be looked upon as anything but night fighters.'

The first positive night kill by a Camel came on 18 December 1917, when Murlis Green, the pioneering night flier, engaged a Gotha bomber at 11,000ft near Goodmayes, Essex, and his fire put one of the bomber's engines out of action. The Gotha subsequently ditched in the sea near Folkestone, Kent. Camels scored again on the night of 28/29 January 1918. Captain G. H. Hackwill and Lieutenant C. C. Banks shared the destruction of a Gotha which fell at Wickford, Essex.

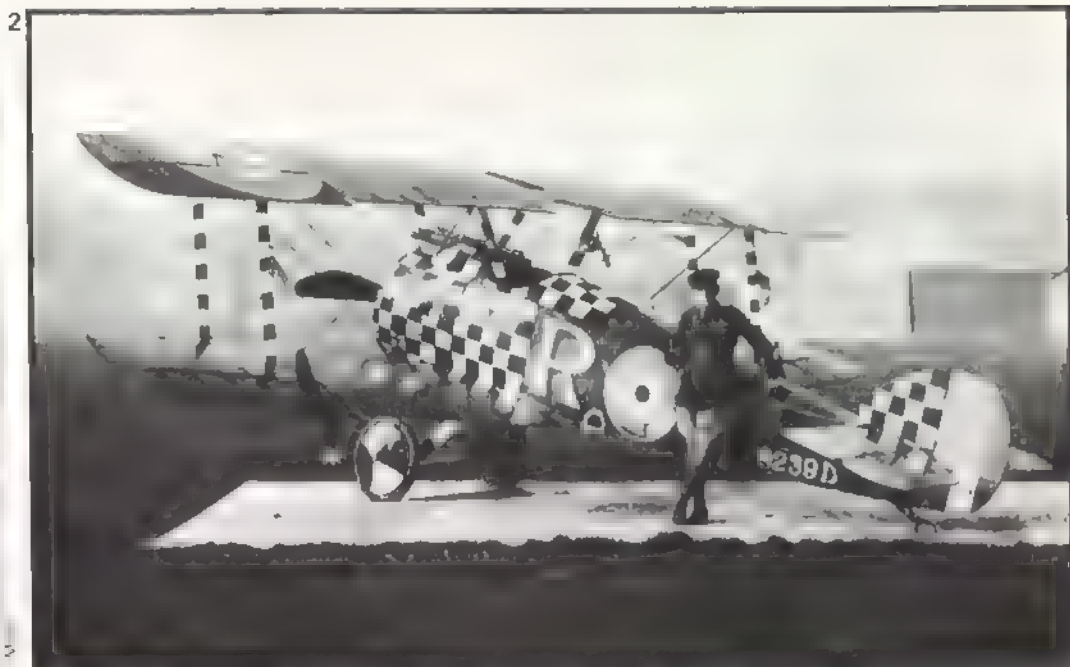
Camels as night-fighters

By March 1918 six more Home Defence squadrons had re-equipped with Camels—either fully or partially. While some employed the standard F1, with its twin Vickers guns, a number of specially modified Camels were also introduced. In these—known as Sopwith 'Comic' by the parent company—the cockpit was moved farther back, virtually exchanging position with the main petrol tank; while the usual twin Vickers guns were removed and a pair of Lewis guns mounted above the upper wing, on Foster rail slide-mountings. Thus, the pilot could fire forward or upward. Variations in armament were common on nightfighting Camels, including a combination of one Vickers and one upper Lewis. But all 'Comics' used instrument lighting and under-wingtip Holt flares for illumination of landing grounds.

The final night victories for Home Defence Camels were on the night of 19 May 1918. Over 30 German Gothas and 'Giant' bombers raided the UK. One Camel from 112 Squadron, piloted by Major Quintin Brand, closed with a Gotha GV and, with two bursts from very close range, sent it down in flames on the Isle of Sheppey. Of the 84 Home Defence planes sent up that night to attempt an interception, 31 were Camels.

The relative success of the Camel as a nightfighter led to the formation of a new unit, 151 Squadron, on 12 June 1918, at Hainault Farm airfield. Commanded by Murlis Green, 151 moved to France on 23 June and set up base at Fontaine-sur-Maye. On 1 July, command of the squadron passed to Major Quintin Brand DSO, MC, and the allotted task for the unit was an *offensive* night-fighting role—the first such unit in the RAF, and 'father' of the World War II night-intrusion operational units.

The squadron's first confirmed victory came on 25 July when Captain A. B. Yuille closed with a Gotha just after midnight and sent it to destruction with both engines out of action. The night of 1 August saw 151's first night-intrusion sorties. Individual pilots attacked the German aerodromes at Estrees and Guizancourt with some success. From then



1 Night-fighter armament, twin Lewis guns, one on usual Foster slide mount, the other fixed to fire 45 deg. Plane belongs to 44 Sqn, Hainault Farm.
2 Colorful Camel D8239 of 28 Sqn with Capt C. M. McEwen, MC, DFC, Florence, Italy, 1919.
3 A converted standard F1 to two-seat trainer, South Carlton, 1918

until the Armistice in November, 151 Squadron's Camels ran up a tally of at least 21 enemy aircraft destroyed in the air, five more probably destroyed and several indecisive combats. This unique record was achieved without a single loss to the unit. A second Camel nightfighter squadron, 152, with an identical role, arrived in France on 22 October 1918, but saw no active service before the Armistice.

After arrival in Italy of Nos 28, 45 and 66 Squadrons RFC, their Camel pilots quickly set about breaking the virtual air supremacy of the Austro-Hungarian air services, which included at least three German *Jagdstaffeln*. Accustoming themselves to flying in the rarified air over the mountainous Asiago and Piave fronts, the Camel pilots were at first concerned mainly with escort protection for the Allied two-seater reconnaissance aircraft. But as 1918 began, air fighting assumed a larger part of their daily operations. On 30 March, three Camels from 66 Squadron jumped a four-Albatros formation over its own aerodrome. In the ensuing fight they managed to send one Albatros down with a dead engine, and slightly wounded the pilot of a second Albatros. The Austrian leader, *Oberleutnant* Benno Fiala von Fernbrugg, shot down one Camel, piloted by Lieutenant Alan Jerrard, who miraculously survived an appalling crash.

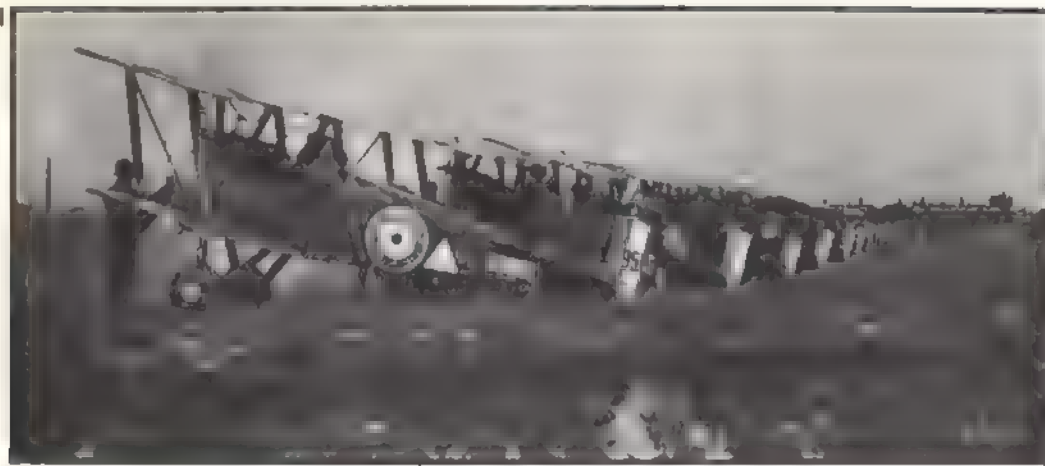
By the spring of 1918 the Camel squadrons had re-established Allied aerial supremacy in Italian skies, and notable pilots such as John Mitchell, C. E. Howell, Matthew Frew and the Canadian, C. M. McEwen were scoring vic-

tories almost daily.

The highest-scoring pilot along the front was another Canadian, George Barker of 28 Squadron. Barker flew exclusively in Camel B6133 throughout the Italian campaign, and gained all but eight of his final accredited war tally of 52 victories in that particular Camel. His first kill on the Italian front came on 29 November 1917 when he attacked an Albatros DIII and the Austrian's top wing folded back, the wreckage falling between Sernaglia and Piave di Soligno. Barker's score mounted steadily over the next few weeks. On 10 April he was posted to 66 Squadron and took B6313 with him to his new unit. With 66 Squadron Barker increased his score rapidly and on 14 July was promoted to Major and made commander of 139 Squadron, a Bristol F2b two-seater unit. By that time Barker's prestige was such that he was permitted to retain Camel B6313, and claimed the aircraft's final victories on 18 September by shooting two Albatros scouts down.

On 29 September Barker flew his last operational sortie in B6313, and next day left Italy for England. The Camel was scrapped at a nearby depot, but its fighting record of 33 enemy aircraft destroyed, six others out of control and nine kite balloons destroyed (seven of these shared with another Camel), all by George Barker, created an unsurpassed tally.

The Camels' contribution to final victory on the Italian Front was by no means limited to air combat success. From 15 June 1918, when the final massive Austrian offensive



1 148 Aero Sqdn line-up at Petite Synthe, in June 1918. The small white triangle on the fuselage was the unit marking.
2 F1 Lt Tomlinson's 2F1, N6603, taking off from HMS Pegasus.
3 Camel N6814, one of two 2F1s employed in experimental launches from airship R23, 1918.
4 A Camel of 208 Sqdn after a bad landing near Cherisy, Sept 1918.

began, the Camel squadrons were widely used for ground-strafting and bombing. Typical of that first day's operations is an extract from the diary of a 28 Squadron flight commander. The unit had been ordered to prepare for evacuation of its base at 15 minutes notice, but '... instead of making any move to retreat, we concentrated on splashing massed Austrians with our Cooper bombs and gunning them at such close range that we could see the expressions on the men's faces. We kept this up until dark when my Flight (A) had a toll of one dead, one missing and one wounded ...' The pattern of that day's operations was to be repeated again and again in the last months of the war, and the Camels were always to the fore. From December 1917 to November 1918, the three Camel squadrons had claimed nearly 450 enemy aircraft—a ratio of almost 10 times their own losses

In the crucible of daily combat over the trenches in France and Belgium, the Camel proved its greatness in myriad operations. Powered by either the 130hp Clerget or Le Rhone engines, a Camel's best fighting altitude was around 12,000ft, at which combat ceiling it was master of the sky. Only the German Fokker Dr1 Triplane approached its maneuvering capabilities in combat. Yet in terms of sheer speed, there were numerous other aircraft types which could show a Camel a 'clean tail'. It was said of the Camel that once it was engaged by enemy scouts, it had to fight its way out—hence the unrivalled scoring rate by its pilots. But as one Camel 'ace' has remarked, 'Speed or not, that was the object of the exercise ...'

Certainly, the most enthusiastic exponents of the Camel's deadly virtues found little to complain about, and the prowess of individual Camel captains was exemplified on 25 March 1918, when Captain John Trollope of 43 Squadron created a new record of destruction by downing six enemy aircraft in one day's operations. His feat was matched on 12 April by another 43 Squadron Flight Commander, Captain Henry Woollett, who finished the war with at least 36 victories. All but six of these were scored from a Camel cockpit. Other 'mass-destruction' Camel pilots included John Gilmour (40 victories), W. L. Jordan (34), F. G. Quigley (34), Ray Collishaw (24 of his final 62 victories), A. H. Cobby, the top-scoring Australian 'ace' (32) and dozens of others.

Such was the Camel's reputation that in June 1918 the United States authorities purchased 143 Clerget Camels and equipped four combat squadrons for the Western Front. The first of these, the 17th Aero Squadron, became operational on 20 June, and was joined in the following month

by the 148th Aero Squadron. On 13 July, Lieutenant Field Kindley of the 148th opened the USAS's war score by shooting down an Albatros near Ypres. Seven days later Lieutenant R. D. Williams chalked up the 17th Aero's first kill of the war. In mid-1918 a further 50 Camels were bought by the Belgian Government, though in the event only one squadron—the 11th 'Cocotte'—was completely Camel-equipped, having 13 Camels on strength by October 1918.

By August 1918 the Camel had reached its peak of technical superiority and was meeting greatly improved German fighters, such as the Fokker D VII which could out-run and out-climb it with ease. Despite such opposition most experienced Camel pilots continued to prefer their continuing 'edge' in maneuverability for the daily cut-and-thrust of combat, and continued to amass victories. On 8 August, the day when the Allied armies began what was to prove to be the final advance in land operations, the recently born British Royal Air Force had a total of 17 Camel squadrons on strength in France, plus the support of two USAS squadrons—representing almost half of first-line fighter units along the Western Front.

By September the air services were used in two main roles—continual strafing of German airfields and depots, and attempted destruction of the far-from-defeated German Air Service in which it was not uncommon for up to 100 aircraft to clash in sprawling dogfights. The sheer pace of fighting and the determination of the *Jagdstaffeln* pilots brought a crop of high Camel (and other) casualties. On 26 August the 17th Aero Squadron lost six in one patrol. While on 4 September, 70 Squadron lost eight Camels in only 20 minutes of savage fighting. On balance, Camels also took a heavy toll on occasion, as on 24 September when 15 Camels of the American 148th 'bounced' 20 Fokker D VII's and sent seven of the Germans down for only one loss. By the November Armistice, a total of 18 Camel squadrons were still operational on RAF strength in France, representing almost 2,500 Camel F1s on overall strength throughout the Service. Immediate postwar public and political opinion dismembered the RAF. By January 1920, no Camel squadron still existed.

The 2F1 version of the Camel—officially termed 'Ships' Camel'—filled a notable gap in the requirements of the Royal Navy for suitable fighting aircraft, capable of being carried aboard larger naval ships and able to scout, and if needed, defend. Gradually replacing the 'mixed bag' of differing aircraft types already employed, the Ships' Camels came to be familiar sights aboard most Royal Navy cruisers and battleships by 1918, being usually stowed on crude



Imperial War Museum



Imperial War Museum

wooden plank 'runways' mounted on the forward heavy guns. One ingenious form of 'runway' was devised and tested in May 1918 by the noted naval pilot Charles Rumney Samson. It consisted of a tiny lighter, towed behind a ship, and provided a simple take-off area in normal sea conditions for a small biplane. After further trials and tribulations, Samson's faith was proved to the hilt on 10 August 1918, when Lieutenant Stuart Culley in 2F1 Camel N6812, being towed by HMS *Redoubt* off the Heligoland Bight, achieved a successful take-off, climbed for an hour steadily and finally reached a Zeppelin—the *L53*—sighted in the area. Pulling the nose of his Camel up, Culley unleashed several bursts from his two fixed Lewis guns. Within seconds the monstrous airship was plunging in flames to the sea.

The other major success achieved by naval-borne Camels involved the Camel complement of the aircraft carrier HMS *Furious*. On 18 July 1918, after a series of delays and frustrations, due mainly to terrible weather conditions, seven (of an originally-intended eight) Camels took off from the deck of *Furious* in two separate flights—their target, the Zeppelin shed complex at Tondern, Schleswig-Holstein.

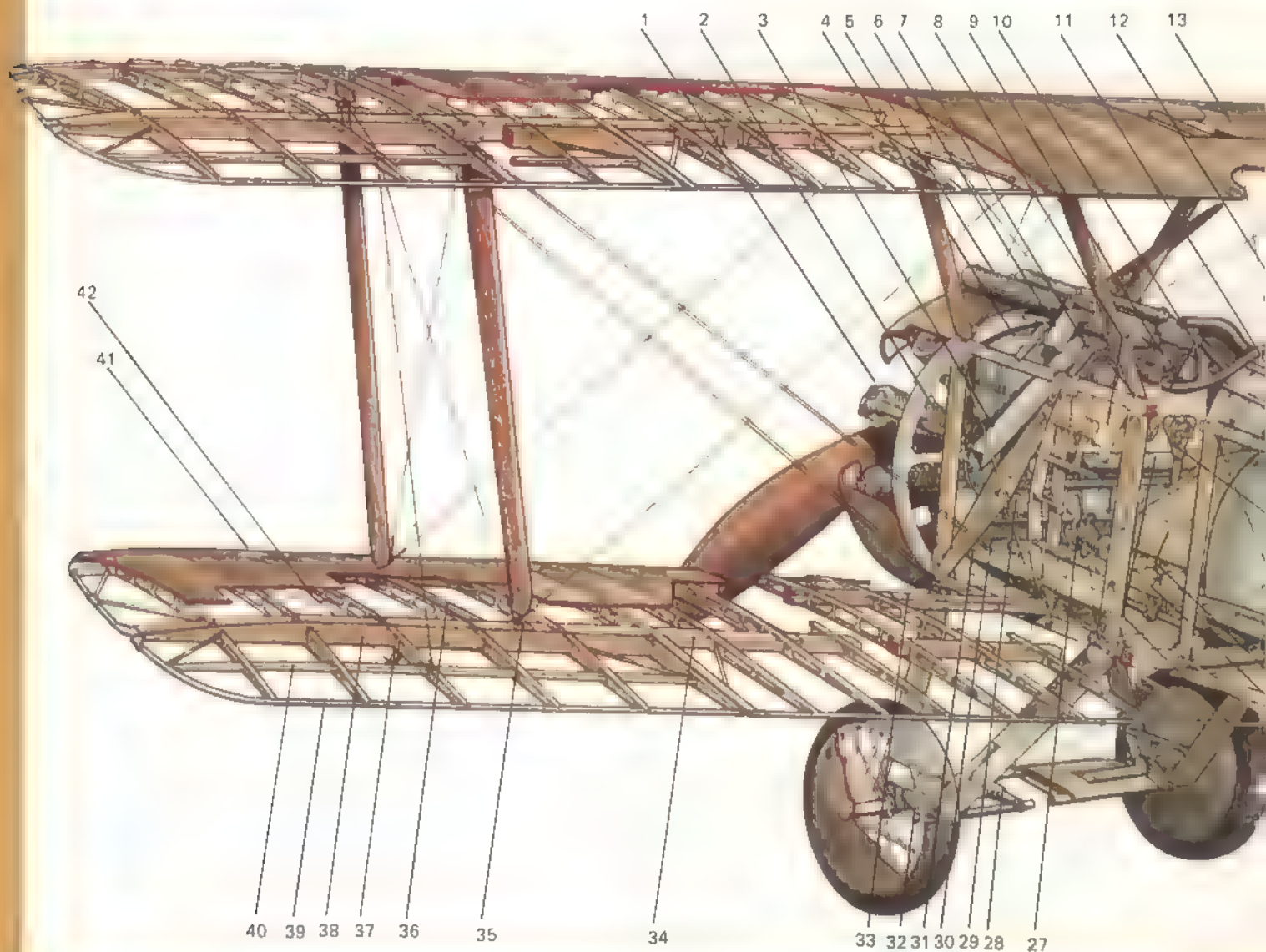
Carrying specially-made 50lb bombs, the first three away reached the airship sheds and scored a direct hit on one of them. The second formation of three (one had aborted with engine troubles early) destroyed a second shed. Between them they had sent two Zeppelins (*L54* and *L60*) down in flames. As the six 'bombers' attempted to return to *Furious*, three were forced to land in neutral Denmark, having run out of fuel. A fourth fell into the sea and its pilot was drowned. The remaining pair, Captains W. F. Dickson and B. S. Smart, finally ditched close to the destroyer HMS *Violent* and were soon retrieved from their sinking Camels.

In peacetime, the Camel found few applications, it was a warplane and as with all purely functional weapons, it 'died' in the peaceful skies of the 1920s. A few continued to be used for warlike operations in Poland, Latvia and Estonia until 1921-22. The vast majority of Camels, however, were consigned to scrap-heaps and war-surplus funeral pyres. Its wartime record of over 2,500 confirmed air victories placed it at the top of any comparative statistical table for fighters; while its many-varied uses in every theater of operations—Britain, France, Belgium, Germany, Italy, the Aegean, Egypt, Palestine, Mesopotamia (now called Iraq) and dozens of other minor areas—spread its fame to all corners of the global war. Today that fame remains, and the Sopwith Camel has come to represent the essence of World War I aerial combat.

Chaz Bowyer

SOPWITH CAMEL F1

- | | | |
|--------------------------------------|-----------------------------------|---|
| 1 Bentley BR1 150hp motor | 17 Steerable ash tail-skid | 33 Ash front spar (routed) |
| 2 Firewall (not shown) | 18 Steel tube outline/nose ribs | 34 Solid ash rear spar on lower wing only |
| 3 Cartridge disposal | 19 Fairleads | 35 Mild steel fittings |
| 4 Castor-oil tank | 20 Ash longerons | 36 Compression strut |
| 5 Twin .303in Vickers air-cooled MGs | 21 Control cables | 37 Aileron control horn |
| 6 Link chute | 22 Tank bearer | 38 Spruce aileron spar |
| 7 Mount for MGs | 23 Turn-buckles | 39 Steel tubing round wing edge |
| 8 Plywood decking | 24 Wicker seat | 40 Spruce sub-bar |
| 9 Cocking handles for twin MGs | 25 Seat bearer | 41 Inspection window |
| 10 Instrument panel | 26 Carburettor air intake | 42 Wire drag bracings |
| 11 Auxiliary fuel tank | 27 Throttle quadrant | |
| 12 Main fuel tank | 28 Undercarriage axle hinge point | |
| 13 Open center-section | 29 Rear engine mount | |
| 14 Control column | 30 Rudder bar | |
| 15 Intermediate formers | 31 Foot-board | |
| 16 Rubber shock cord | 32 Bungee shock-absorber straps | |





W. HOWES

A 'remake of a remake of a remake' Camel F1. This aircraft, in the RAF Historical Museum, Hendon, London, is an exact replica of the World War I fighter. For the stickler for accuracy the main fault is the serial number which is a prefabrication. The original serial number of this particular aircraft is as yet unknown. Otherwise the Camel is just as it was in its heyday in the skies of the Western Front during World War I.

Engine

130hp Clerget 9z
110hp Le Rhone
100hp Gnome Mono
150hp BR1

Wing span (both wings)

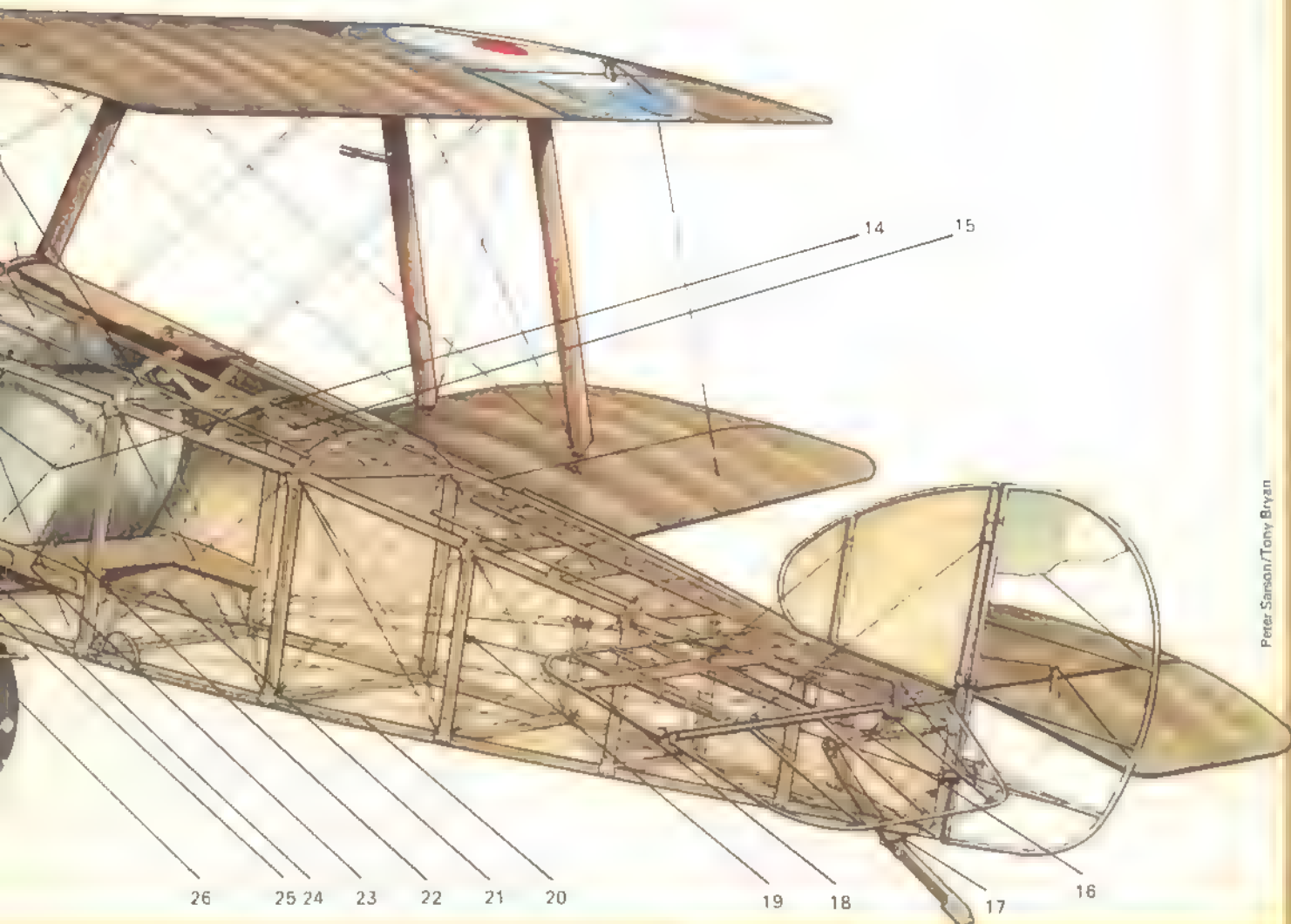
28ft

Length

18ft 9in (Clerget)
18ft 8in (Le Rhone)
19ft (Gnome)
18ft 6in (BR1)

Height

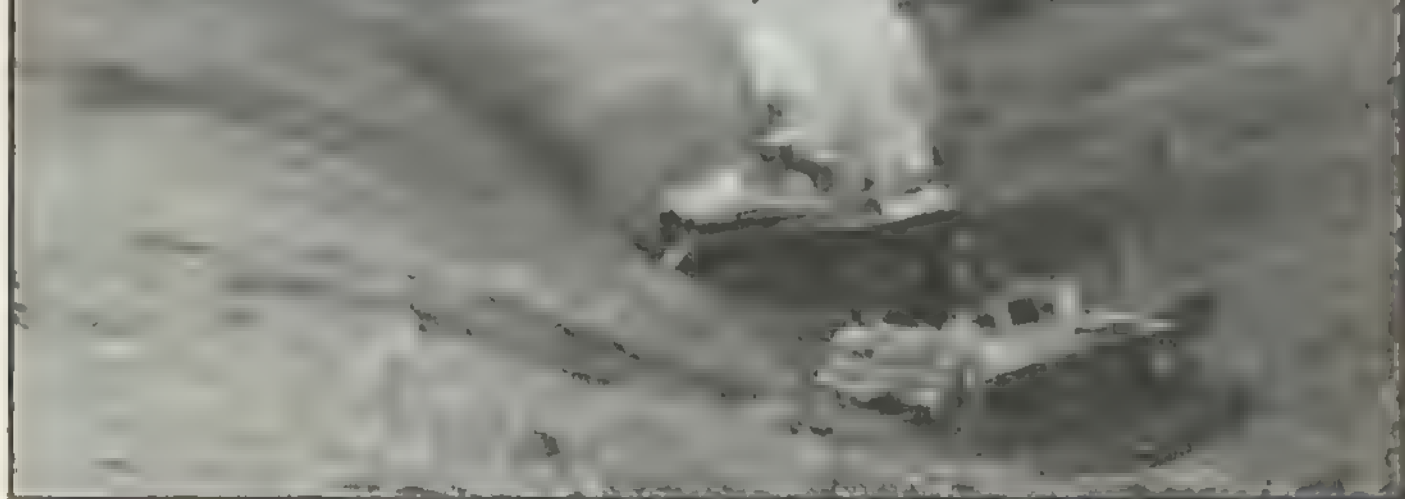
8ft 6in (Clerget, Le Rhone, BR1)
8ft 9in (Gnome)



Peter Sanson/Tony Bryan

THERMOPYLAE 1941

There was no repeat of the Spartan stand when the Allies faced the German Army at Thermopylae in 1941



© Alamy Images

'If on their own the Greeks resolve to fight, we must share their ordeal.' It was in fulfilment of this resolve of Winston Churchill that Australians and New Zealanders found themselves fighting a modern rearguard action on 24 April 1941 over the hallowed ground of Thermopylae Pass where in 480 BC the epic last-ditch stand of King Leonidas and his 300 Spartans had united and inspired Greece to annihilate the invading Persians by sea and land. There was to be no such sequel in 1941 with a German army attacking, but the ANZAC defense of the Pass was the last major and the most successful rearguard action during the British Army's seven-week sacrificial campaign in Greece.

Mussolini's infamous unprovoked attack from Albania upon Greece began on 28 October 1940. The Greeks immediately invoked the British guarantee, given them on 13 April 1939, and Churchill, despite Britain's perilous situation, at once sought means of coming to Greece's aid. Fighting bravely under General Alexander Papagos, the Greeks soon had the measure of the Italians other than in the air. General Ioannis Metaxas, the Greek dictator, was afraid that large-scale British intervention might bring Germany into the war so he settled for RAF support only. Six squadrons of fighters and bombers under Air Vice-Marshal John H. D'Albiac, together with ground crews and AA defences, were sent to Greece from Egypt.

Meanwhile, the British C-in-Cs in Cairo were watching the Tenth Italian Army marching laboriously across Cyrenaica to attack Egypt. On the night of 7 December 1940 General Sir Archibald P. Wavell launched his 'Thirty thousand' in a 560-mile counter-stroke that drove the Italians out of Cyrenaica within eight weeks, capturing 130,000 prisoners, 400 tanks and 1,290 guns. On 12 February 1941, the day Lieutenant General Erwin Rommel landed in Africa,

Wavell received a congratulatory signal from Churchill ordering him to halt any further advance on Tripoli, the capital of Italy's N. African empire still 500 miles distant. Instead, he was to hold Cyrenaica with the minimum force possible and dispatch an expeditionary force to Greece.

What was the cause of this change of plan which prevented Wavell's subordinates expelling the Italians from North Africa before Rommel could attack? Primarily it was Churchill's aim to forestall any further extension of German influence in the Balkans, and if possible to bring Yugoslavia and Turkey into the war.

It was for this object that Foreign Secretary Anthony Eden and the CIGS, General Sir John Dill, were sent out to Egypt on 14 February 1941 to conduct discussions with the Greek, Turkish and Yugoslav governments. Aid to Greece was high on their agenda but Metaxas thought the British should finish off Italian N. Africa; he believed that British intervention in Greece would provoke an irresistible German invasion. However, Metaxas died suddenly on 29 January 1941 and his successor as Prime Minister was not such a strong man. The Greek Army, fighting deep in Albania, was weary and the Germans were moving troops into the Balkans. The Greek government, yielding to British pressure, accepted the offer of a BEF.

Hitler, not consulted by Mussolini prior to his attack on Greece, was not sympathetic to Italian difficulties. But he had decided on 18 December 1940 to attack Russia in the spring or early summer of 1941 (Operation *Barbarossa*). In order to cover the German armies invading Russia it was essential that the Balkans should be on Germany's side. Hitler was fearful that the British would repeat World War I and land at Salonika. Irrespective of Mussolini, Hitler decided that *Barbarossa* would be preceded by a campaign to forestall the British going there. This operation—*Marita*—

◁ *Mussolini, Hitler and Keitel in conference. Hitler's interest in Greece and Yugoslavia was to secure the Balkans prior to the invasion of Russia—Operation Barbarossa.*
 ▽ *British troops leaving Greece by the shipload.*



was to be launched from Bulgaria by Field Marshal Sigmund Wilhelm List's Twelfth Army and the objective was the coast of Grecian Thrace between Salonika and Dedeagach. Five divisions were to be employed. On completion, the Bulgarians would take over static defense and List's army would join Army Group South for the invasion of Russia.

In the Balkans Hitler could count on the passive or active support of German-occupied Hungary, Rumania and Bulgaria. Turkey remained obstinately neutral. Yugoslavia was being assiduously wooed by both Britain and Germany, but on 25 March the pro-Axis government of Prince Regent Paul concluded a non-aggression pact with Germany. The way now seemed clear for *Marita* as a curtain-raiser to *Barbarossa*.

The British response was to be 1st Armoured Brigade (Brigadier V. H. S. Charrington); the New Zealand Division (Major-General Bernard C. Freyberg VC) and 6th Australian Division (Major-General Sir Ivan Mackay). The 7th Australian Division and the Polish Brigade were to follow later. Lieutenant-General (later Field-Marshal) Sir Thomas Blamey, GOC 1st Australian Corps, was to be field commander. The force with three attached Greek divisions was known as 'W' Force after its overall commander, Lieutenant-General Sir Henry Maitland Wilson.

Greek concern over Hitler

Greece only agreed to the dispatch of this BEF on 4 March. There was all too little time to transport 57,577 troops in 25 transports from Egypt. Moreover, the Greeks, anxious to avoid provoking Hitler, insisted that Wilson should wear civilian clothes. He was only able to inspect briefly the position his troops were to occupy. This was the so-called Aliakmon Line which ran from the mouth of the River Aliakmon, south of Salonika, NW along the slopes of the Olympus-Pieria mountains to the Yugoslav border. This 70-mile line, naturally strong, could be turned from Monastir in S. Yugoslavia. No mutual defense agreement existed between Greece and Yugoslavia. Three Greek divisions already deployed along the Aliakmon Line would come under Wilson's command and he would be subordinate to the Greek C-in-C, Gen. Papagos.

The landing in Greece, over a fortnight, of virtually three divisions with two months' food and ammunition as well as 14,000 tons of engineering stores stretched Middle East Command to the limit. Yet this monumental task was accomplished without the loss of a single vessel and with almost no interference from the Italian Air Force. But it had its ludicrous aspects; such as the sight of the German military *attaché* in Athens standing by the quayside watching troops disembarking while Wilson had to keep away for fear of arousing German suspicions! A convoy-seeking sortie by the Italian Fleet ended in the disastrous night action of Cape Matapan, Greece's southernmost point, on 28 March which cost it three heavy cruisers, two destroyers, a damaged battleship and 2,400 men as against the Royal Navy's loss of one pilot. Meanwhile there had been a *coup d'état* in Belgrade which overthrew Yugoslavia's pro-Axis government. The young king was proclaimed Peter II; the Regent and his ministers fled. Hitler, taken by surprise, reacted with characteristic speed and brutality.





- ◁ German Panzer IIIs advance on Larissa.
- ▷ A Panzer III of 2nd Panzer Div. armed with a 37mm gun.
- ▽ The bombed-out hulk of the British transport Ulster Prince She ran aground on 24 April while evacuating troops from Nauplion
- ▽▽ New Zealanders camouflage a 25pdr position.

German quote on p.30/31 is from Lt.-Gen. Sir Edward Puttick's '25 Battalion' by permission of New Zealand Dept. of Internal Affairs, Historical Pubs Branch

The German Second Army was to occupy Yugoslavia from the north and List's Twelfth Army from the south. The *Luftwaffe* would flatten Belgrade. The codename for this operation—*Punishment*

Churchill greeted the Yugoslav coup with delight but it added greatly to Wilson's troubles. If the German Twelfth Army, already concentrated in Bulgaria, advanced into Yugoslavia it could outflank the Aliakmon Line via Monastir. Wilson deployed 1st Armoured Brigade to guard against this threat. The New Zealand Division, shortly to be joined by 6th Australian Division, was on the right, stretched over 15 miles and defending Mount Olympus Pass. Wilson's Greek divisions were on the left of Blamey's 1st Australian Corps.

Time was not on Wilson's side. His troops were arriving piecemeal, lacking front-line transport and even ammunition, and they were short of sandbags and barbed wire. One Australian brigade was still in Egypt and lines of communication through Greece were wide open to airborne attack. Air Vice-Marshal D'Albiac now had four Blenheim bomber squadrons and four fighter squadrons, only one flying Hurricanes; a total of 80 serviceable aircraft and the Greek Air Force could provide no support against 1,100 Axis planes in the Balkans. To make matters worse the 104 cruiser and light tanks of 1st Armoured Brigade were mechanically unreliable and suffered from worn tracks. On 5 April Wilson, at last free to change into uniform, assumed command openly. At 0515 the following day, Germany declared war on Greece and Yugoslavia. Supported by 800 aircraft, 24 German divisions began to roll forward. Wilson had just been told by Wavell that he could expect no more troops. Rommel's surprise advance in Cyrenaica had begun on 24 March. It would take him to the Egyptian frontier in three weeks.

The British campaign on the mainland of Greece was from start to finish a withdrawal' records the Official History. Wilson was fortunate to have some of the toughest and most independent-minded soldiers in the world. They might have to give ground but they never gave up, and in Blamey, Mackay and Freyberg he had three exceptionally unflappable commanders.

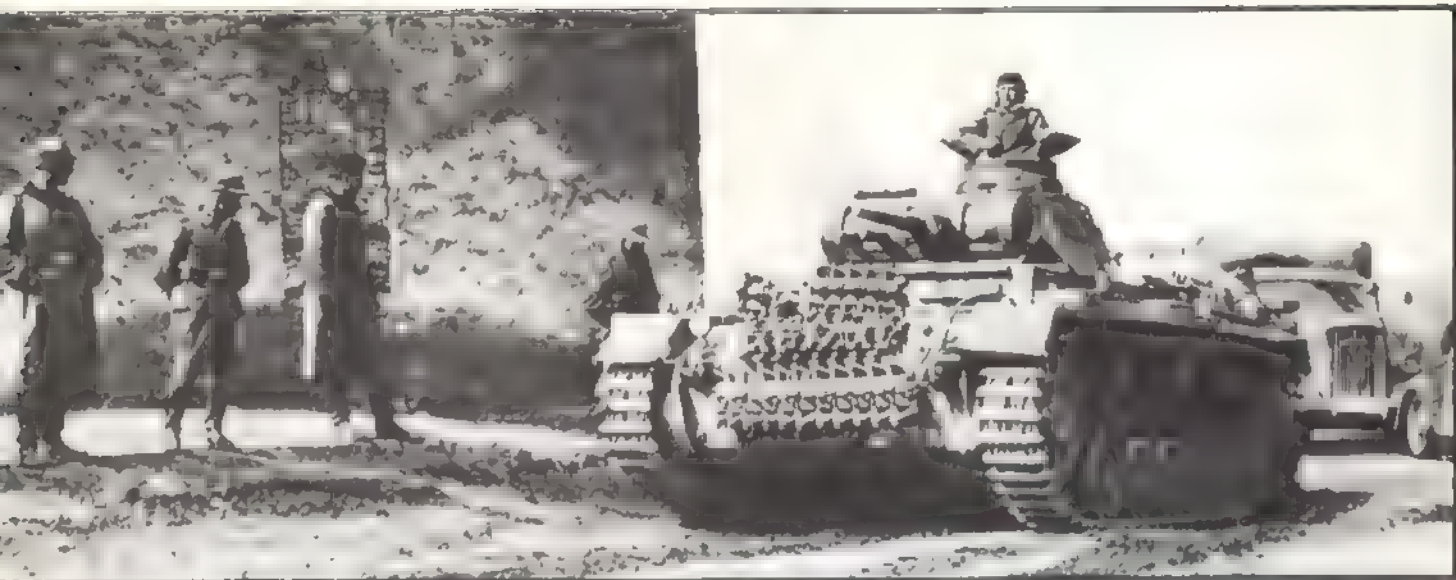
In only three days three Greek divisions defending E Macedonia were overwhelmed by six German and Salonika was entered on 9 April. The German advance into S

Yugoslavia simultaneously cut off that country from Greece. The key strategic town of Monastir fell on 10 April and the way into Greece lay open; Wilson's Aliakmon Line was now outflanked. Equally disastrous was the *Luftwaffe* bomber attack on the Piraeus during the night of 6/7 April. The 12,000-ton *Cian Fraser*, unloading 350 tons of TNT, caught fire and blew up. This explosion destroyed seven merchantmen and 85 light craft. It made Greece's principal port unusable for two days, halving its handling capacity. Belgrade fell on 13 April and all organized Yugoslav resistance ceased.

The 19th Australian Brigade was hurried north to block the expected German advance through Veve while 1st Armoured Brigade was pulled back and the New Zealand Division withdrew from a position only just taken up in order to cover the Olympus Pass in greater strength. 'W' Force had successfully redeployed by morning, 10 April, and that evening SS *Leibstandarte Adolf Hitler* Motorized Division brushed with the Australians at Veve.

Meanwhile the bulk (15 divisions) of the Greek Army had been attacking the Italians in Albania hoping that the Yugoslavs could maintain pressure from their side. But the fall of Monastir forced Gen. Papagos to break off the battle and withdraw his troops to a line from Santa Quaranta on the coast across the Pindus Mountains to the Aliakmon near Servia. This would have enabled the Greeks to keep in touch with 'W' Force but withdrawal orders were not given until 12 April. By then it was too late.

A fierce battle took place on that day between 19th Australian and 1st Armoured Brigades against the *Adolf Hitler* and 9th *Panzer* Divisions. The Germans were roughly handled and ran short of petrol and ammunition. The British held their ground but further withdrawal was inevitable. A shorter line was occupied from Mt. Olympus to Servia, the gap between 'W' Force and the Greeks withdrawing from Albania being filled by Wilson's Greek divisions. Unfortunately their lack of transport delayed their movement through the mountains. They began to disintegrate and the gap between 'W' Force and the main Greek force widened never to be closed. 'W' Force dug in on the new line and waited for the expected German assault. It was 14 April and Lt.-Gen. Blamey, with Maj.-Gen. Freyberg's agreement, revived the title of 1st ANZAC Corps, immortalized at Gallipoli 26 years before.



Sutton/Her Ver ag



The British Museum



The British Museum

The main danger at this stage of the campaign came from the *Luftwaffe* which roamed more or less at will dive-bombing and machine-gunning anything that moved along the narrow mountain tracks. D'Albiac's gallant squadrons were overwhelmed by sheer numbers while their few remaining airfields were systematically blasted by Axis bombers. On 16 April Wilson, worried that 'W' Force was about to be cut off from the Greeks, met Gen. Papagos. Wilson proposed a 100-mile retreat to the supposedly strong Thermopylae position, blocking the main road to Athens, and Papagos agreed. He suggested that Wilson consider embarking his troops since Greek resistance could not continue much longer. The suggestion came as no surprise to Middle East Command. Evacuation planning was already in hand at Cairo. Churchill replied on 17 April that the withdrawal to Thermopylae should proceed and evacuation preparations begin with Greek agreement.

Thermopylae is best known for the heroic three-day delaying-action fought there in 480 BC by King Leonidas and his 300 Spartans along with 7,000 other Greeks against at least 200,000 Persians. The Pass then was a narrow chariot-width track between mountain and sea but by 1941 the sea had receded three miles and the position was far less defensible. The main road to Athens from Thessaly crossed the mountains by the Brallos Pass 10 miles west of Thermopylae, its initial climb coincided with the beginning of the Anopaea goat-track betrayed to the Persians by which they outflanked the defenders more than 2,000 years before.

The widely dispersed units of 1st ANZAC Corps, covering a 60-mile front, had to be extricated from contact with the enemy and then transported 100 miles across the Plain of Thessaly to Thermopylae with the *Luftwaffe* above them and four divisions in hot pursuit. That this was achieved without undue loss speaks volumes for the staffs and troops involved but it finished off 1st Armoured Brigade. The tanks had a nightmare drive along a mountainous track from Servia to Kalabaka and by the end of it were mechanically incapable of performing a mobile role.

The New Zealand Division holding the Mount Olympus line was heavily engaged during 16-17 April but managed to disengage successfully and by 19 April was back on the Thermopylae position. The day before, the Greek Prime Minister had committed suicide and there was panic in

Athens. Wavell flew there on 19 April and a British evacuation was again advised by Gen. Papagos. Wavell replied that the British hoped to establish a strong position at Thermopylae and would fight for as long as the Greeks wished. Two days of confusion followed. Lt.-Gen. Blamey told Wavell that he could not hold Thermopylae indefinitely. Wavell then reported to the King of Greece and his ministers that the only course was embarkation unless the Greeks falling back through Epirus could join the British. The king was dignified but could not conceal the bad news that senior officers in Epirus had deposed their commander and were negotiating with the Germans. On the evening of 21 April this surrender was accepted by the Chief of Staff of German Twelfth Army. 'W' Force was now exposed to the full weight of the German onslaught.

Preparations for rescuing 'W' Force were being made by Adm. Cunningham long before the decision to evacuate. Embarkation was to begin on 24 April and be completed during three nights from eight beaches around Athens and in the Peloponnesus. Only men, personal arms and valuable equipment, such as gunsights, were to be taken off. Supplies of use to the Greek people would be left; everything else would be made useless or destroyed.

Effective harassing artillery fire

At Thermopylae 22-23 April had seen some spirited artillery duels while the ANZAC Corps began to thin out its units for evacuation at night and the Germans struggled on cratered roads to get forward in sufficient strength to mount an attack. On the seaward side, 6th New Zealand Infantry Brigade had the support of 90-odd 5.5in medium and 25pdr field guns (five artillery regiments) and despite dive-bombing attacks these kept up effective harassing fire from concealed positions. So well were ANZAC defenses hidden from probing patrols and intense *Luftwaffe* daylight activity that Lieutenant General Georg Stumme, commanding the pursuing 40 Motorized Corps, and having sorted out its traffic jams in Lamia, aimed his main attack at the Australian-held Brallos Pass merely intending to follow it up by pushing a battalion-sized reconnaissance force through Thermopylae.

At 0730 on 24 April, the day British evacuations started and King George II of the Hellenes flew to Crete, German air and artillery preparation began. At Brallos 65 Stukas dive-bombed the previous day's (empty) gunpits of the 2/2nd Australian Field Regiment for two hours. From its new positions, 1,500 yards farther back, the regiment's 25pdrs brought down pinning fire throughout the day on three German battalions trying to shift 2/11th Australian Infantry Battalion from the Pass by both direct attack and toilsome flanking moves through the mountains. Despite lavish use of mortars the German mountain troops constantly ran into close-range Vickers MG fire from previously undisclosed positions and did no more than accelerate 19th Australian Brigade's withdrawal timetable by half an hour.

Meanwhile, 5th *Panzer* Division was to storm up the Lamia-Athens highway with a battle group from 31st *Panzer* Regiment's 1st Battalion, '88s' of 61st *F/ak* Regiment, engineers, motor-cyclists, and some new heavy self-propelled infantry guns. One tank platoon would turn off through Thermopylae and test the road to Molos for the reconnoitering *Gruppe Baacke*. But having crossed the River Sperkhios the main column found its route blocked by demolitions around midday. Lt. Gen. Stumme, on the spot, diverted the whole force to Thermopylae. Meanwhile

the scouting tank platoon skirted the mountain wall between the two passes and lost a tank to 'artillery firing like mad' some two miles beyond the forward New Zealand infantry positions.

At 1400 two *Panzers* gingerly tried the swampland east of the Salt Springs and were knocked out for their pains. An hour later some 60-80 motor-cycle combinations and cyclists preceded another four tanks that drove directly down the road for a short distance while infantry clambered over ridges and through gullies to lever 25th New Zealand Infantry Battalion off its hillside positions commanding the road. The 700-odd NZ soldiers, who had only come under fire for the first time in the last week, were deployed almost exactly along the line of the ancient pass fought over by the ancient Greeks and Persians.

Throughout the afternoon tentative efforts to make ground along the road by German armor and transport from Brallos were foiled by accurate and concentrated artillery fire from the New Zealand 25pdrs around Molos. The infantry battle on the scrub-covered hillside widened in scope and grew ever fiercer. At 1630 the forward NZ rifle company had to retire on neighboring 'A' Company. Not until 2000 did the latter unit check the insistent German infiltration around its HQ with hand grenades and a conclusive bayonet charge. At 2230 the righthand 'D' company finally embussed for what was to be an almost non-stop 200-mile journey to the Peloponnesian evacuation beaches. The battalion had smoothly extricated itself despite German 'fire and movement' carried out with strong MG and mortar support and kept up right until nightfall.

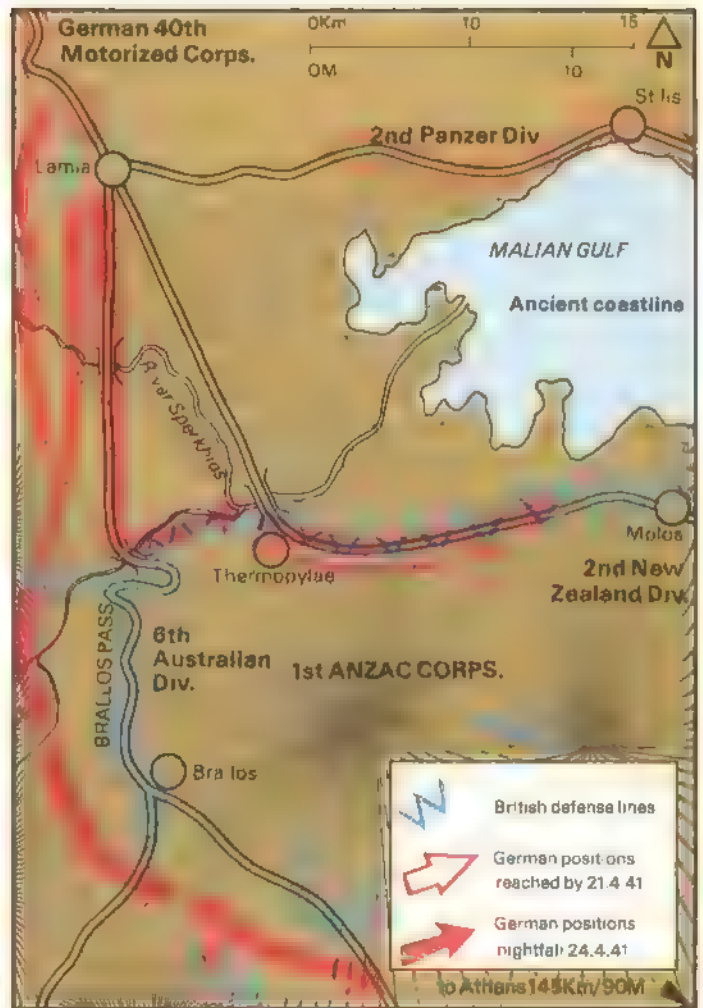
'Headlong tank attack' the only way

The only way Lt. Gen. Stumme could seriously disrupt the British timetable for an orderly retreat that night was by a headlong tank attack down the road to Molos in the few daylight hours remaining. This cavalier but demoralizing tactic had after all carved a way through the Balkans for the past 18 days over the stiffest terrain. At about 1800 the forward *Panzer* commander passed on the order to the 19 tanks of Captain Prince von Schoenburg's No. 1 Company, 'push through to Molos and destroy the artillery.' There would be no accompanying infantry since shell-fire invariably forced them to go to ground beneath the cliffs or in the road ditches. What followed is vividly told by a combat report from 31st *Panzer* Regiment's 1st Battalion:

'Nineteen tanks in file charged along the yellowish country road . . . On our right the hills rose 800 metres, and on our left stretched the dreaded Thermopylae swamp. We had to push on, go on, do anything but stop. Again and again the tanks were shaken as by giant fists. The drivers involuntarily pulled their heads a few inches back from their driving slits. . . . Suddenly we came under fire from 6 or 8 guns. Without halting we swung our turrets round to the right and answered the fire with great effect. . . . We were still moving. We must get through! . . . A few Tommies ran across the road and disappeared in the thick scrub . . . A few yards farther on a light tank had run into the hillside. Nothing moved round it. Its abandoned machine-guns stuck straight up. In its hull was a hole the size of a plate, and its tracks hung in shreds from the driving sprocket . . . In the middle of the road sat three other tanks, all on fire . . . Forward where the boss was, the situation was grave. Prince Schoenburg had already burst through the enemy's main gun positions, but his tank had been



△ The left-hand map shows the direction of the Axis advances as they swept into Greece from Yugoslavia, Bulgaria and Albania. Allied defenses were overwhelmed. The speed of the German advance can be seen by the



distance covered in only three days (right-hand map) to confront 1st ANZAC Corps at Thermopylae.

▽ A Leibstandarte SS Adolf Hitler mortar team. These were the first Germans fought by the British in Greece.



immobilised . . . "I will not think of withdrawing", cried the boss into the microphone.'

Prince Schoenburg's tank was the one that got farthest, thanks to covering fire from two of the four 75mm-gun Panzer IVs attached to his company of Panzer IIIs that morning. Before his tank was disabled by the close-range shot of a New Zealand 2pdr AT gun he had gone the length of 25th Battalion's front to a point not far short of a small road bridge, perhaps in the vicinity of the Spartan last stand marked by the modern monument. Twelve of the attacking tanks, all of which were hit, leaving only two fit to shoot, were total write-offs with 29 casualties out of crews totalling 70 men. They had run a two-mile gauntlet through what the German account described as a *danse macabre* performed by an estimated 40 guns.

In close support of 25th NZ Battalion were 20-odd AT and field guns on both sides of the road and these had held their fire until the *Panzers*, spaced 50 yards apart, came within 600 yards through the terrifying barrage from the guns around Molos. At 300-400 yards 'F' Troop of 5th NZ Field Artillery Regiment switched to using 20lb AP shells accounting for three tanks before the battered column took refuge in a roadside hollow into which 'E' troop poured short-range fire. The 23-year-old Bombardier E. W. Santi was 'the perfect gun layer, a natural' setting nine tanks on fire which left Schoenburg to push on alone and vainly. All three NZ Division artillery regiments had contributed to this annihilating outcome by firing their first and last 'stunk' (concentrated fire from all divisional artillery on one point), in Greece. Only an hour later, having fired most of their lovingly husbanded ammunition, the gunners began to wreck their 25pdrs before retreating.

Sensational German advances

The Germans over-extended by their sensational advances had been unable to match this massed artillery in time. Only two '88' batteries had been got into action. One, behind the tanks, had to cease firing when the smoke from the burning *Panzer* hulks obscured observation. The other only got into action around dusk at Stilis, seven miles across the Malian Gulf, and attracted counter-battery fire from British 5.5in medium guns four miles east of Molos.

Considering the chaotic roads, and one almost total breakdown in communications, the next six hectic days of evacuation was carried out remarkably successfully in spite of a daring German paratroop seizure of the Corinth Canal. Lt. Gen. Wilson flew to Crete on 26 April leaving Maj.-Gen. Freyberg to supervise the final stages. He left on 28 April but unfortunately that same night disaster befell some 7,000 men under Brig. Parrington at Kalamata, the westernmost evacuation beach. Around 2000, just as the troops were beginning to move towards the beaches, a 5th *Panzer* Division advance company entered Kalamata. There was fierce street fighting, in the course of which New Zealand Sergeant J. D. Hinton won the VC, but not until 0100 was the town cleared. Unfortunately ship-to-shore communications were cut by the capture of the naval embarkation officer and his signalman. After much confusion the captain of the Australian light cruiser *Perth* decided that too few men were left to justify the risk to the ships. At 2130 the force withdrew, four destroyers embarking 300 wounded in their whalers. Brig. Parrington surrendered at 0530 on 29 April, 2,000 of the prisoners taken being Palestinians and Cypriots; 300 of those captured were 4th Hussars, Winston Churchill's own regiment.



△ April 1941. The Germans' relentless advance through Yugoslavia. In the taking of Yugoslavia and Greece, the Germans lost fewer than 5,000 men killed and wounded





◀▽ British prisoners taken at Corinth, 26 April 1941.
 ▽ Motorcycle troops of 2nd Panzer Division enter Katerini, N. Greece, evacuated by the New Zealanders on 14 April.



When it was all over, the Mediterranean Fleet could proudly claim to have rescued 50,732 troops including an uncertain number of Greeks and Yugoslavs. The price paid was two destroyers and five transports out of some 50 ships involved. Total British casualties in Greece came to 12,000, many sick and wounded who returned to duty later. The RAF lost 133 valuable aircrew and 209 aircraft.

The Royal Navy had once again performed a near-miracle; but wars, as Churchill observed after Dunkirk, are not won by retreats. It has been claimed that the British sacrifice compelled Hitler to postpone the invasion of Russia by five weeks but this is hard to substantiate. D-day for Operation *Barbarossa*, originally 15 May, was deferred at the end of March by a month and then fixed for 22 June. One reason for postponement was the very wet spring and early summer which made the 'going' in Russia very bad for tanks and vehicle; the River Bug was still over its banks in some areas in late May. Another factor was the time required to redeploy the considerable forces committed in Yugoslavia and Greece. But the postponement was not caused by the British landing in Greece, Hitler had all along intended to capture Salonika (to deny it to the British) before he turned on Russia.

Infuriated Hitler postpones Barbarossa

It was the *coup d'état* in Belgrade that led Hitler to postpone *Barbarossa*. So infuriated was he by this act of defiance that he resolved to smash the Yugoslavs. This needed far more German troops than the much more limited operation in Thrace. It may be argued that the presence of British troops in Greece encouraged the *coup*, but this is hard to prove. The very spontaneity of the uprising and its rapid success is evidence of Yugoslav disgust with their government for allying itself to Hitler. If there had not been a British soldier in Greece, the Yugoslavs would still have risen against tyranny.

It is a curious fact that although every senior British commander involved had the gravest doubts about the *military* wisdom of sending an army to Greece, not one appears to have questioned the *political* necessity. 'At the final meeting in Cairo with Wavell, Eden and Dill,' wrote Adm. Cunningham, 'I gave it as my opinion that though politically we were correct, I had grave uncertainty of its military expedience. Dill himself had doubts, and said to me after the meeting: "Well, we've taken the decision. I'm not at all sure it's the right one."'

The Germans seem to have had no doubts. In a postwar interview Major-General Walther Warlimont, of Hitler's staff, revealed: 'We could not understand at the time why the British did not exploit the difficulties of the Italians in Cyrenaica by pushing on to Tripoli. There was nothing to stop them.' It was Churchill who stopped them in order to chase the Balkan will-o'-the-wisp of an S. Europe front against the Axis. So far as the Greeks were concerned it turned out to be a gallant but quixotic gesture, fondly remembered in 1944 when the British returned to Greece on the heels of the Germans to pre-empt a Communist takeover. Intervention on the side of a small weak neutral country had its impact on the US Congress that passed the Lend-Lease Bill on 8 March 1941. But in the context of Britain's military situation that year it was a tragic sacrifice undertaken because to do nothing was seen as politically unacceptable and would have been infinitely more shaming.

James Lunt

OSKARSBORG 1940

The invading German fleet took a beating as it neared Norway. But a naval stratagem fooled the defenders

Manning coast defenses in various countries during World War II was a thankless task. For the most part the guns were manned day and night for the whole five and a half years—never to see the enemy. In other places their armament had the intended effect of keeping hostile warships away from the shore. But the enemy often arrived overland to take the port from the rear. Such a contingency was rarely the province of coast defense to guard against, though they invariably did their best and usually got the blame if the port was taken. In one or two cases, however, the enemy obligingly appeared on the water, in front of the guns, intent upon attack. And in spite of the long periods of inaction which might have been expected to dull the edge of the garrison's keenness and ability, in every such case the enemy suffered heavily for his pains. One of these affairs—and a little-known one—occurred when Germany attacked Norway in 1940.

One of the principal objectives was the Norwegian capital city, Oslo. A strong German force was destined for Oslo since, as well as the military aspects of the place there was also the hope that a sudden strike might succeed in capturing the King of Norway and the principal members of the Government. Another possibility was the capture of the stocks of gold bullion in the vaults of the Bank of Norway. Other objectives were the installation of German control in the various administrative departments of the Norwegian Government and Civil Service, and, not least, the landing in Oslo of a large staff of Gestapo officials whose prime task was to be the rounding up of various people known to be outspoken opponents of Nazism.

Oslo lies at the northern end of the Oslo Fjord, a 60-mile-long finger of water navigable by the largest vessels. About half-way along there is a scattering of islands which narrow the navigable channel yet more. At this point lay the



Oskarsborg Festning

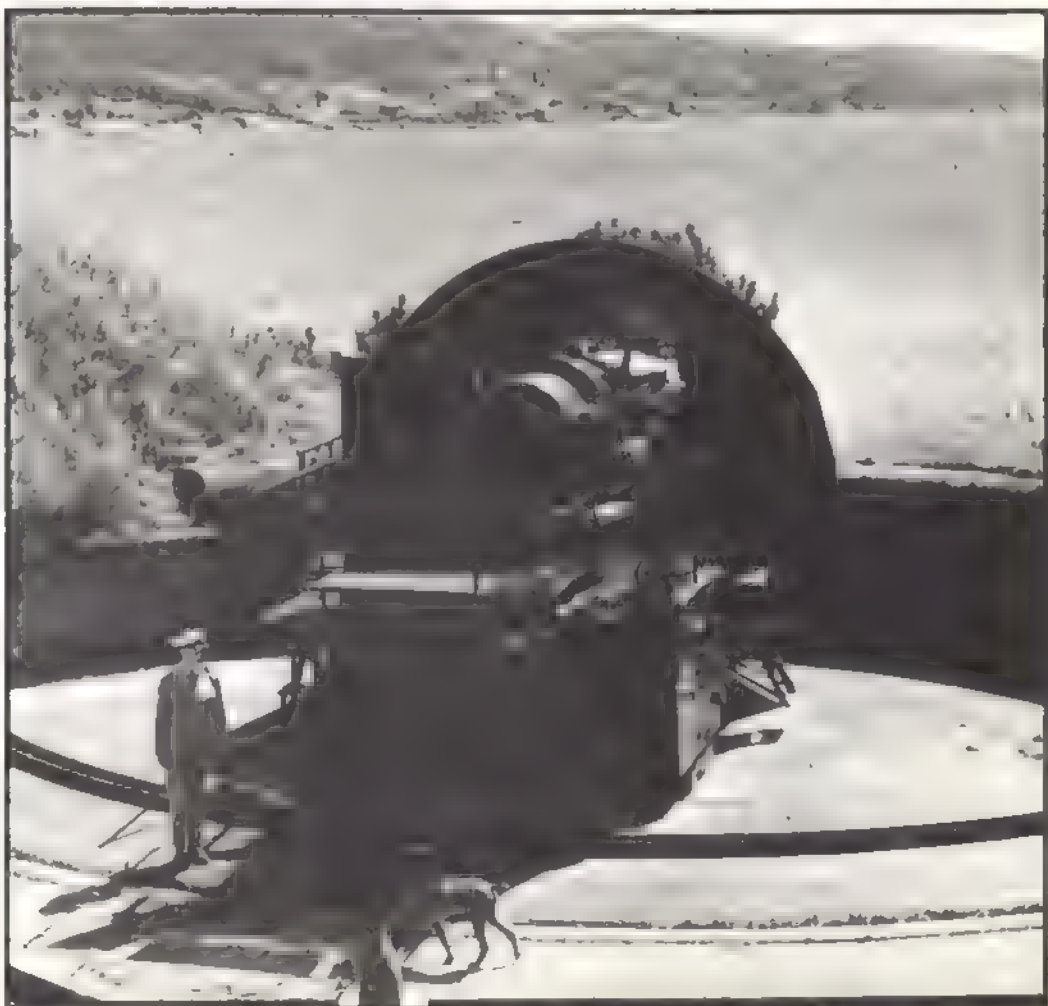


U.S. Navy

◁ The Third Reich's first military move against Norway was savagely and successfully repulsed. Here is an artist's vivid impression of the Blucher under accurate fire from one of the three 11 in guns at Oskarsborg in the early hours of 9 April, 1940. Ironically enough, the guns of Oskarsborg were built by Krupp of Germany. Despite heavy damage, Blucher managed to limp to what her crew felt was safety, but was, in fact, right in the path of the fortress's torpedoes. Blucher was sent to the bottom, rolling over and sinking in the funeral pyre of her own fuel.

△▷ The cruiser Lutzow hammered away at the Oskarsborg fortress to little or no effect. She was previously named Deutschland, but Hitler could not bear the thought of a ship with the name of the Fatherland being sunk.

▷ One of the 11 in guns at Oskarsborg fortress guarding Oslo fjord.



Norsk Telegrambyrå



Oskarsborg Fortress, built during the nineteenth century. Its armament had been periodically revised since then, and in April 1940 it consisted of three 11in guns; four 11in howitzers, three 5.9in guns; two 4.7in guns, six 57mm 6pdr guns; and four 24in torpedo tubes. In addition there were numbers of searchlights to provide night illumination for the guns, and a floating boom obstacle blocking a side-channel and so ensuring that no approaching ship could avoid the arc of fire of the fortress guns. The war plans also called for the laying of a minefield across the navigable channel when mobilization was ordered.

On the face of it, 18 guns and four torpedo tubes sounds very little with which to defend a nation's capital city. It is less than most warships of the day could muster. But like every other coast defense work, Oskarsborg had one great advantage—it had solid rock underneath it. It did not float and it was not short of space.

Although guns had been placed on ramparts pointing out to sea for almost as long as guns have existed, it was not until the arrival of the ironclad warship in the 1850s that strong coast defense really became vital. Before then a few small cannon were considered adequate to beat off attacks by wooden ships or to deter landing parties in rowing boats. But such guns were no use against ironclads. They could sail in close to the defenses to bombard them with impunity. Coast defense guns had to become more powerful, leading to heavy rifled muzzle-loaders which could send their chilled iron shot through 2ft of iron plate armor at a range of a mile or more. But because fire control and sighting were still primitive, engagement ranges were short, and this meant that the coast guns had to be as well protected as the ships they were firing at. In this way rose the huge forts of the time, with granite walls 15ft to 20ft thick, pierced by casemate ports lined with 2ft thick slabs of iron armor.

Since service of these guns was slow—one shot in two

After being torpedoed from emplacements on North Kahlomen the Blucher limped on for another 100 yards or so before heeling over off Halangstangen. After their savage reception at Oskarsborg, the Germans realized that a purely seaborne capture of Oslo was out of the question. Other means would have to be employed.

▷ With Norway safely under occupation, German troops inspect one of the guns that gave the initial invasion force such a bloody nose at Oskarsborg. This one is a 57mm six-pounder QF gun of 1890 vintage.

▷ Less than three weeks after the sinking of the Blucher, German troops are carried to shore by tender in Oslo Harbor, 27 April 1940. In the background is the 8in-gun heavy cruiser Admiral Hipper, Blucher's sister-ship, which led a successful landing at Trondheim on invasion day.

minutes was good going—large numbers of forts and guns had to be provided to swamp an attacking force with fire before it could get close enough to damage the forts or bombard the areas which the forts were intended to protect naval dockyards and bases or commercial ports.

This era of fort-building started off an arms race which, in many ways, resembled today's race between missiles and anti-missile missiles. Navies were constantly designing and launching ships with thicker or tougher armor. This led to their potential opponents pressing for the design of even more formidable ships with more powerful guns. As the navies obtained their new guns, so the forts had to keep pace, re-arming with more effective weapons and making more powerful protection.

The late nineteenth century saw great strides in gun design and much re-thinking in coast defenses. The old granite and armor forts, which, though impenetrable were glaringly visible, were gradually abandoned in favor of low-profile works concealing guns of greater power and provided with the most up to-date means for range-



mpjer at War Museum



finding, observation, communication and ammunition handling. Since the extra power of the guns meant longer ranges, the shore gunners had to be able to locate an enemy ship with great precision in order to shell it accurately. In this respect they had an important advantage over their floating opponents—more room to operate. The theory of a range-finder is well-known, but the warship is restricted in the size of rangefinder it can use—a base of about 90ft being the maximum. The accuracy and maximum range of a rangefinder is largely dependent upon the length of its base. On land, however, instruments acting as the end of a massive rangefinder could be placed a mile or two apart—giving an enormous increase in accuracy and precision.

When it came to the actual shooting, once again the shore guns had all the advantages. They were firmly anchored to solid earth, they had ample space around them to lay out the most convenient and efficient methods of ammunition supply, and they could be dispersed, concealed and protected. Familiarity with their area allowed the gunners to prepare precise charts, set up position-finding equipment, and fire practice shots at frequent intervals. Moreover they were firing at targets of some size. The standard battleship target used for practice was 900ft long and 40ft high—a fair representation of a warship's bulk on the water.

The sailors, on the other hand, were riding up and down on the ocean; cramped for space, in a strange locality, and trying to shoot at a gun which presented them with a target about 15ft wide by 6ft high, armored, protected by several feet of reinforced concrete, practically indistinguishable against its background, and a very long way from the ship. It was no contest.

In addition to their guns, the defenders of the shore had a few more devices working for them, devices often thought to be the prerogative of the naval forces, notably the mine and the torpedo. Military mining is as old as its naval equivalent and much more formidable. Mining for coast



◁ The last the world saw of the German cruiser Blucher Norwegian authorities had not given the mobilization order, so Blucher passed through a 'controlled minefield' unscathed. All the mines were in storage. As the heavy cruiser came in range, 11 in and 5.9 in guns opened fire—causing severe damage to the deck and superstructure. But battered though she was, Blucher did not sink. Her crew may have thought they were safe, but then two torpedoes holed the engine room and main torpedo magazine. Blucher sank while her band played 'Deutschland, Über Alles'.

▷ Our maps show the course of the German invasion fleet as it steamed toward Oslo on 8 April 1940, and the formidable Norwegian defenses it encountered at Oskarsborg fortress. It can be seen that any invader would have problems.

Norsk Telegrambyrå

defense was not simply a matter of dumping mines into a likely stretch of water and hoping the enemy would steam into them; they were controlled mines. Anchored in a carefully plotted pattern in an area over which the enemy fleet had to sail to reach the defended areas, each mine was linked electrically to a control room on shore, overlooking the minefield area. A position-finding instrument in the control room was linked to a plotting board upon which the location of every mine was marked. Should an enemy ship enter the minefield it was tracked by the position-finder and its course displayed on the board. When its position coincided with that of a mine, the appropriate switch was closed and the mine detonated beneath the vessel.

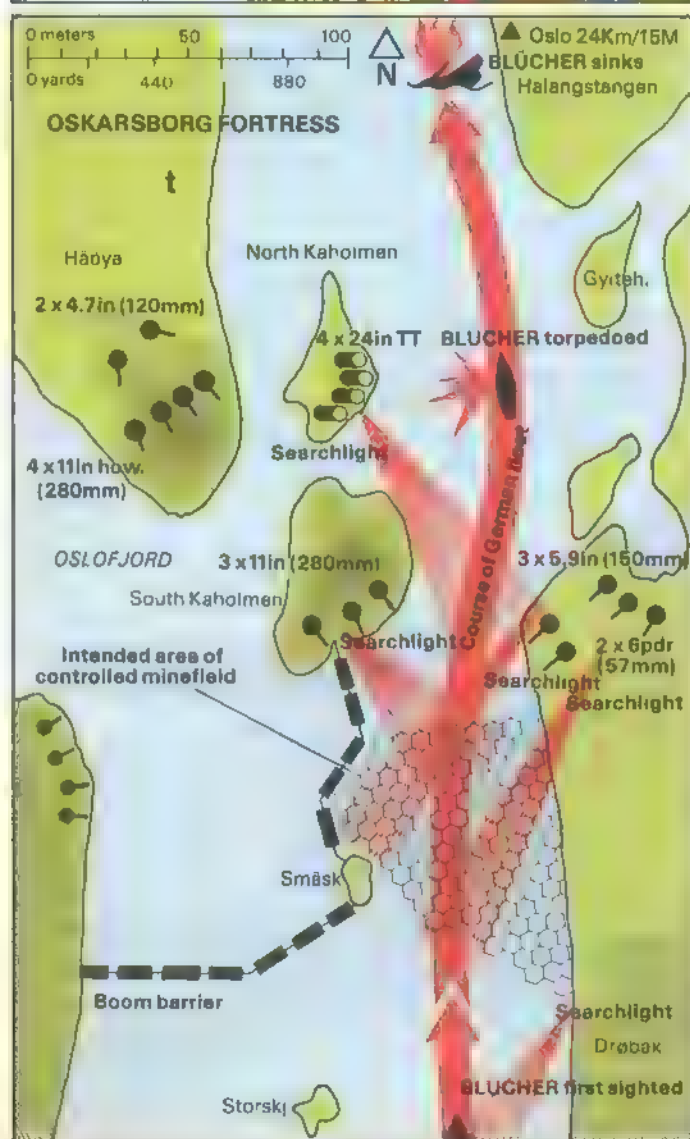
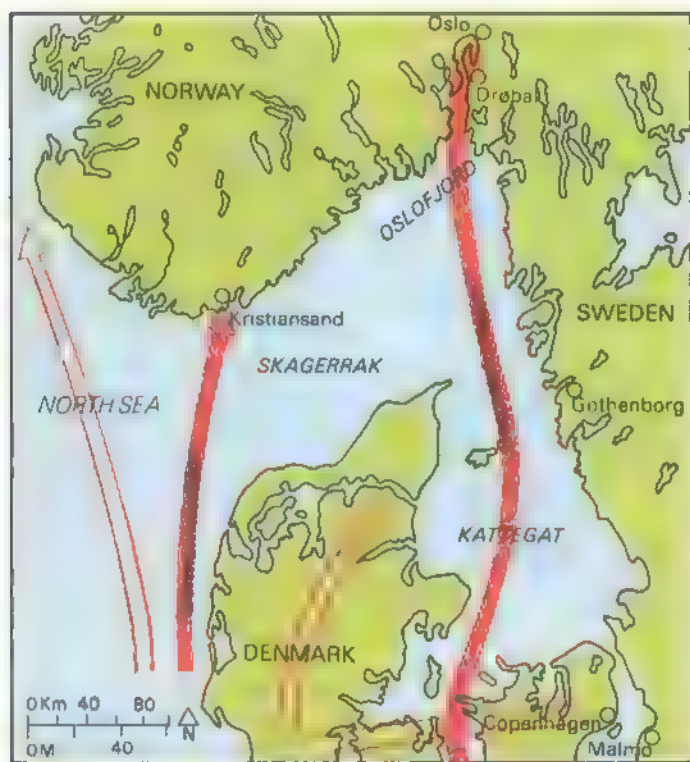
Coast defense torpedoes rank as the first guided missiles ever introduced into military service. The Brennan Torpedo was installed in British forts on the Thames as early as 1886. It was a submerged torpedo driven by wires, unreeled from spools inside the torpedo by a steam engine on shore. As the spools turned, they drove the torpedo propellers. By varying the rate of unwinding from the spools the torpedo could be steered. A flagstaff which projected above the surface of the water gave the controller an indication of where the torpedo was going, and it could be guided with considerable accuracy for about two miles. As naval torpedoes improved, so did the land-based models. The Brennan, and similar types, was superseded by the self-propelled torpedo in the early years of the twentieth century. These were launched either from dry land, in a similar manner to launching them from a ship's deck, or they could be mounted in special chambers in the fort, below sea level, and launched under water. In either case the advantages enjoyed by the guns—firm base, precise range-finding, space

in which to operate—applied equally to the torpedo installations. Moreover they were usually sited where the range to a possible target would be short and there would be little chance of missing. Any ship within range of a shore-based torpedo installation was living on borrowed time.

Adding all these things together, one begins to see the sense behind the remark attributed to Admiral Sir John Fisher: 'No sailor but a fool would attack a fortress.' Whatever possessed the German Navy to think they could sail past Oskarsborg without paying a heavy penalty will never be known; they were no fools. Perhaps Hitler's unbroken run of success had turned them into foolhardy optimists.

The Oskarsborg defense, then, was well up to the job. The 11 in guns could fire a 625 lb AP shell every 45 seconds. The howitzers, in positions concealed from the water, fired their 750 lb shells high into the air to curve over and drop steeply down to pierce thin deck armor at ranges where the guns might have had trouble in puncturing the side plates of a warship. The smaller guns were provided with shell suited to wrecking superstructures. The massive torpedoes, each carrying several hundred pounds of explosive, could sink almost anything afloat. The only fault in the defenses was the absence of the minefield. Mobilization had not been ordered, and therefore the mines lay harmlessly in their depot instead of lurking in the fjord.

As well as this Oskarsborg complex there were three smaller forts at the mouth of the Outer Oslo Fjord where it met the open sea of the Skagerrak, and it was here that the war began for the Norwegian coast defenses on the night of 8/9 April 1940. The Royal Norwegian Navy had been mobilized, and a small patrol vessel was cruising in the



mouth of the fjord. At 2315 this ship radioed a signal that a number of unidentified warships were approaching, and then sailed in to challenge them. Getting no reply to its recognition signals, the patrol boat opened fire and scored a hit. But the enemy fleet promptly unleashed a storm of gunfire. The patrol boat sank in minutes.

This exchange of fire alerted the three forts. Their garrisons manned the guns and warned Oskarsborg. At 0030 the approaching fleet was identified as German and the forts began shooting, but a rapidly-rising sea fog prevented the fortress observers from seeing the effect of their shots. It also diffused the searchlight beams so that they dazzled the gunlayers. Some hits were made, but not enough to deter the German force from entering the fjord for their final dash to Oslo.

Oskarsborg was now fully manned. Sentries were peering into the darkness. Luckily there was no fog in this area. A lookout spotted the shadowy bulk of an approaching ship on the water and gave the alarm. A searchlight was exposed, illuminating the leading ship and picking out the German ensign. This was the German cruiser *Blücher*. As soon as the target was illuminated the 11in gun battery opened fire at a range of only 1,900 yards. At such a range a miss was impossible, and the first AP shell smashed into *Blücher's* gunnery control center abaft the bridge, detonated, and effectively stopped any centralized control of the ship's armament. The 5.9in battery also opened fire, their first round striking the ship's bridge, collapsing most of the structure onto the fore gun-turret beneath.

... and the band kept playing

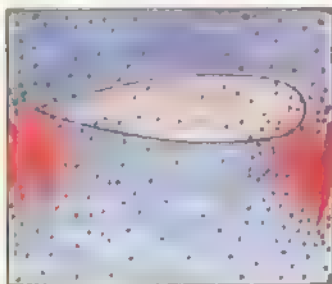
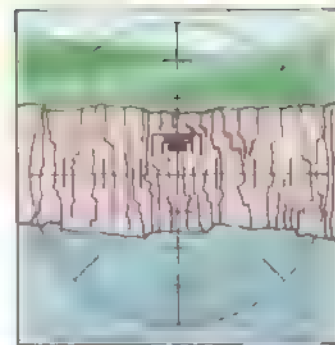
Though without central control the guns of the cruiser could still fire under the orders of their gun captains, but their return fire had no effect on the Norwegian guns which continued to pound the *Blücher*. Gradually, the ship slowed down and flames and smoke began to pour from holes in the deck and superstructure. As the crippled vessel passed the battery, the guns stopped firing and turned their attention to other targets. *Blücher's* crew may have thought that the worst was over and that they might yet make Oslo in one piece. They were mistaken. The guns had abandoned *Blücher* only because it was entering the zone of the torpedo battery at the northern end of the fortress, a long-stop position intended for exactly this situation; let the guns slow up the target so that it became a sitting duck for a broadside shot from the torpedomen. Now, two torpedoes were launched, one of which struck the engine room and the other the main torpedo magazine. Two enormous explosions shook the vessel. It lost way and began to heel over. As the ship's band played '*Deutschland, Deutschland Über Alles*', the crew and the super-cargo—administrators, military officials and Gestapo staff—began to jump overboard and swim for the shore. Soon the cruiser lay on its side, and shortly afterwards it sank in a pool of blazing fuel oil.

The next target for the guns was the Gunnery Training Ship *Brummer*. The first shells struck its superstructure and started fires. That was sufficient; the *Brummer* and the rest of the fleet, which included the battleship *Lutzw* and the cruiser *Emden*, turned about and sailed back down the fjord, to anchor out of range of the guns.

The gunners of Oskarsborg were understandably pleased with themselves. But they had only a few hours in which to enjoy their victory. They were about to be instructed into some new methods of warfare which had not been thought



Diagrams show the problems and advantages for sea and land based gunners. The land-based emplacement has a clear edge overall: there is ample space to employ range-finding equipment. A ship, too, makes a sizeable target on the water. But for the ship-bound gunner with his smaller and not-so-accurate range-finding gear, floating ship and difficulty in pin-pointing the coastal gun, the chance of scoring a hit was small. And when both parties attained similar accuracy the effects were very different. Near misses on a ship were not fatal, but could result in considerable damage. A similar bombardment of a coastal battery had no effect whatever.



David H. Johnson

of when coast defense was born and which, in the long run, were to result in the abandonment of coast defense entirely. At 1000 the next morning a wave of Stuka dive-bombers appeared—the vanguard of a concentrated air attack which lasted, on and off, until the evening. It has been estimated that over 500 bombs of various sizes were dropped on the fortress during that day, but they had little effect. The guns were all well protected in concrete and armor, they were tiny targets hard to find, and in spite of the attack the end of the day found the fortress in full fighting trim. Indeed, it might be said to have shown a profit on the day, since the fortress AA guns claimed four attacking aircraft shot down and another 10 damaged.

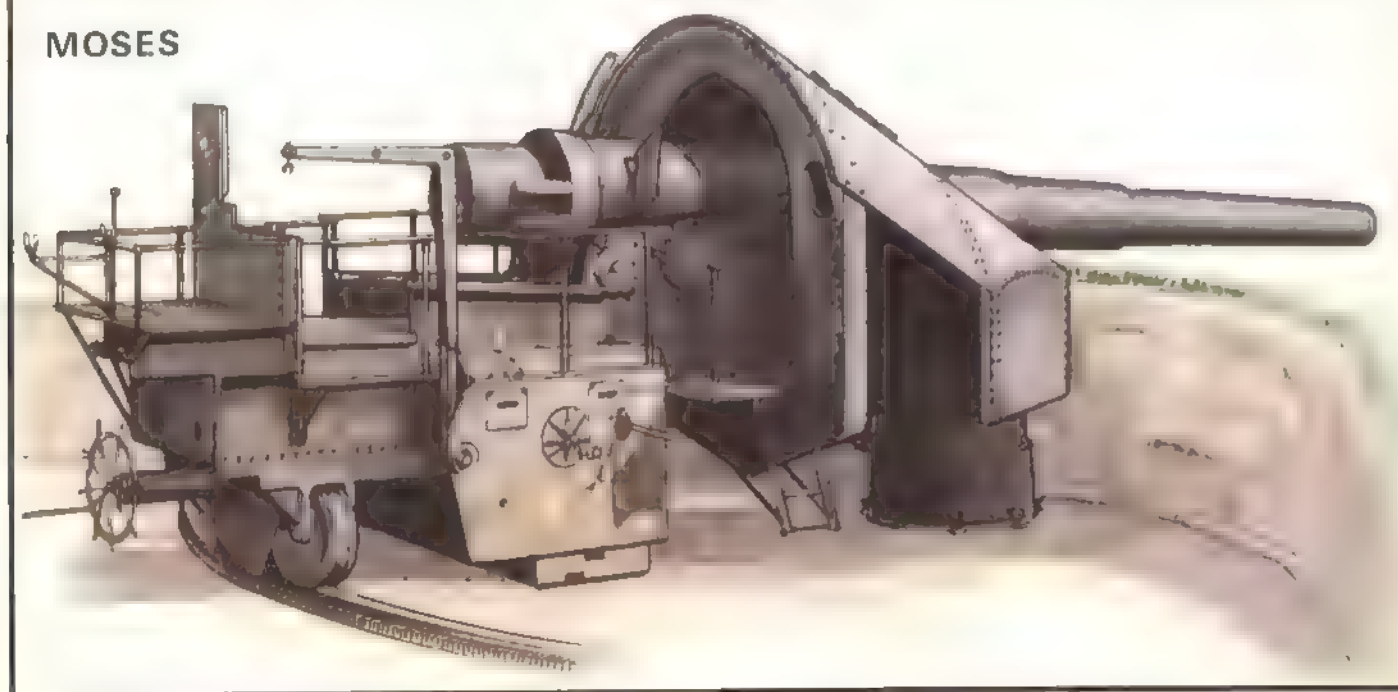
Interspersed with this air attack, the *Lutzow*, from its anchorage, shelled the fortress sporadically. But this too had little effect since the range was 11,000 yards and accurate observation on the well-hidden guns was all but

impossible. While all this had been going on, however, the remaining ships had landed their troops and vehicles about 12 miles south of the fortress and, from there, bypassing Oskarsborg, the column set out for Oslo.

The defence of Oslo by the Oskarsborg Fortress had been carried out exactly as it had always been planned, and with exactly the planned effect. No ship could run the gauntlet of the fortress and survive to remain a threat to Oslo. Unfortunately for Norway, however, the rules of war had

▽ '*Moses*', one of three M1892 11in guns at Oskarsborg fortress. Each of these Krupp guns could fire a 625lb AP shell every 45 seconds to a range of 10 miles. Why the Germans thought that they could steam past the guns of Oskarsborg without suffering heavy losses remains a mystery. So far, they had had an unbroken run of success. It may have blunted their better judgement.

MOSES



Peter Sarsion/Tony Bryan

FURER, Norwegian Coastal Defence

A Furer (senior sergeant) of the Norwegian Coastal Defence Artillery in 1940. On his cap is the Norwegian national cockade, while the green piping on his tunic collar and cap indicates that he is attached to coastal defense. He carried a .45 automatic pistol, 1914 model. This was housed in a waist holster—the magazines being held in a pouch on the same belt. His rank insignia is on the cuffs.



been re-written. It was now being demonstrated that there were other ways of getting to Oslo without passing the fortress guns. As the land column rolled into Oslo, Junkers Ju52s began landing at Oslo airport with reinforcements.

Nevertheless, the delay imposed on the German plans by the action at Oskarsborg was sufficient to allow the King and the Government to escape the trap set for them, for the gold to be saved and for the army to be alerted. Moreover the sinking of the *Blucher* and the loss of the administrative and Gestapo staffs, together with their records and files, undoubtedly hampered subsequent German administration in Norway and gave a lot of Norwegian patriots a head start which they put to good use in forming one of the most effective resistance organizations in Europe.

The action at Oskarsborg was echoed in other Norwegian coast fortresses during that eventful night. At Kristiansand, in the south of Norway, lay the Odderoya Fortress, with two 8in guns, four 9.45in howitzers, six 5.9in guns and search-lights. At 0500 on 9 April the Royal Norwegian Navy warned the fortress that warships were approaching. The alarm was sounded and the guns manned and loaded. As dawn broke, the fortress sentries saw the German cruiser *Karlsruhe* approaching, followed by seven destroyers, 11 E-Boats and a number of supply and transport ships. One gun of the fortress fired its statutory 'heave-to' shot across the *Karlsruhe's* bows. The result of this polite warning was that the cruiser sheered round and fired a broadside of shrapnel. This, to a coast fortress, was about as lethal as snowballs, but it served to remove any doubts about the visitor's intentions. The fortress promptly opened fire with all guns, scoring several hits on the cruiser. After a fierce exchange of shots the fleet turned back to sea—laying a smoke-screen to cover its retreat. It was discovered later that during this retreat the *Karlsruhe* was spotted by a British submarine, torpedoed and sunk.

'Protectors' of the Norwegian people

A few minutes after the departure of the fleet, German aircraft appeared over Kristiansand and dropped leaflets, announcing that the German Army were coming as friends and protectors of the Norwegian people. The Norwegians took leave to doubt this. Their doubts were amply confirmed when a large force of Heinkel bombers arrived and showered the town with high-explosive and incendiary bombs.

There was a short lull and then came a radio message on the fortress command wave-length; 'British warships approaching—do not fire.' Shortly afterwards a fleet appeared over the horizon, approaching at high speed. As they closed in, observers agreed that they did not look like the British. This was soon explained when it was seen that the leading vessels were flying the French *tricolor*. This relieving fleet stormed into the harbor, and before the locals knew what was happening, German troops were swarming ashore. 'It was simply a stratagem of war', explained the German commander.

Much of the activity of the Norwegian Army was lost sight of when events in France and Belgium took pride of place on the world stage in the following month, and what part of the Norwegian campaign has been examined in print seems to have centered on the ineptly-handled British intervention. In relation to their size, however, the Norwegian coast defenses probably did as much damage to the German war machine as any other units in the whole of the campaign.

Ian Hogg

NELSON AND RODNEY

A grouping of three triple 16in turrets gave these two Royal Navy battleships a unique place in naval design

Anyone who has fought in a major war knows that in barrack-room ballads there is always more than a modicum of truth. One ditty which rang around the messes during the Greece-Crete campaign of April-May 1941 went:

Roll on the Rodney, the Nelson, the Hood,

*The whole ***** Air Force is no ***** good!*

When the *Hood* was sunk by the German battleship *Bismarck* on 24 May 1941, the words were changed by popular consent to:

Roll on the Rodney, the Nelson, Renown

*You can't have the Hood 'cause she's ***** gone down!*

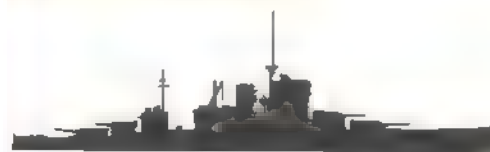
Senior naval officers might not have expressed themselves in song, but they must have shared those sentiments in September 1939 when only *Nelson*, *Rodney* and *Hood* of the Royal Navy's 12 battleships and three battle-cruisers were judged superior to most of the warships of any potential enemy.

The battle-cruiser *Hood* and the battleships *Nelson* and *Rodney* were the only British capital ships completed between 1918 and 1939. There were unusual features in the design of the two *Nelson*-class battleships, the result of a chain of circumstances begun in 1915 when the Admiralty

The unmistakable lines of HMS Rodney, just six years old in 1931. At this period, Rodney and Nelson were the pride of the Royal Navy and were visited by thousands of visitors during Navy Days at Portsmouth, Hants.

planned four 42,100-ton units mounting eight 15in guns and capable of 30 knots or more. German plans were shelved in 1917, and at the end of the war, because of time and limitation of dockyard space, the British programme was reduced to one ship - the *Hood*, launched in 1918. But the Royal Navy's post-war plans were ambitious. In 1920 the Admiralty ordered four 48,400-ton battle-cruisers, mounting nine 16in, and initiated designs for a class of five battleships of around 48,500 tons, mounting nine 18in. The Washington Naval Treaty of 1921, limiting capital ships to

SIZE COMPARISONS



HMS Warspite 639ft long



HMS Nelson 710ft long



HMS Vanguard 814ft long

35,000 tons and 16in main armament, cancelled those plans, but features from them were carried forward to Britain's two 'Treaty ships', *Nelson* and *Rodney*.

The cancelled battle-cruisers were to have mounted their 16in guns in triple turrets (the Royal Navy had previously favored twin turrets) and, in order to save weight and combine high speed with hitting power, the main armament was to be concentrated forward and the machinery well aft. This arrangement reduced to a minimum the areas requiring heavy armor. In the *Nelson*-class this concept was taken further. Instead of siting two turrets forward of the bridge and one just aft, all three triple 16in turrets were placed forward of the superstructure.

The overall length of 860ft for the 1921 units was reduced to 710ft, although the draught of 32.5ft extra-deep forward and 34.7ft extra deep aft at extra deep load remained the same. More weight was saved in the machinery of the '*Nelson*-class'. The use of super-heated steam meant that eight small-tube boilers were adequate. The engine rooms were located forward of the boiler rooms, and, due to the 45,000 SHP available, twin-shaft/screw propulsion was preferable to the four-shaft arrangement of the *Hood* (and the later '*King George V*-class'). At extreme deep load, the *Nelson* displaced 41,250 tons with 38,400 tons and 37,800 at extra deep and deep loads respectively. Standard displacement was originally 33,313 tons for *Nelson* and 33,730 tons for *Rodney* as built, although various additions to armament added 400-500 tons by early World War II. For both, the design figure was 35,000 tons.

Nelson, the seventh Royal Navy ship to bear the name since 1806, was launched on 3 September 1925; *Rodney*, eighth to bear the name since 1759, on 17 December 1925. Both were completed in 1927. To their admirers, the battleships represented a happy compromise. They were well-armed—especially after three eight-barrelled 2pdr guns and four four-barrelled 0.5in MG mountings were added to their AA capability in 1937-38—adequately protected—the Director of Naval Construction stated that '... 500lb bombs would not effect damage to (these) battleships ...'; and fitted with the latest equipment—both ships carried aircraft, and *Rodney* was the first British battleship to carry radar (the prototype *Type 79Y* set) in 1938.

Some people felt their faults outweighed their virtues, however. They were 'Cherry Tree ships' (cut down by Washington I); ugly, with a 'tanker' silhouette; slow—their maximum of 23 knots was to make them unsuited to

operations with high-speed carrier task forces; and seriously lacking in fire-power astern. Leaving appearance aside, and noting that the tasks given them in World War II were such that lack of speed was not always a major handicap (and was partly compensated by a wide radius of action: 5,500 miles at 23 knots; 16,500 at 12 knots), the last criticism was the most important.

When the after 16in guns were trained abaft the beam and fired at any considerable elevation, the bridge of a *Nelson*-class was a perilous position, although structurally it was quite safe. Captain Cunningham (later Admiral of the Fleet Viscount Cunningham of Hyndhope), who commanded *Rodney* in 1929-30, remarks in his autobiography: 'it was possible from the bridge to see quite ten feet down the bore of the nearest gun,' and recounts how an attempt was made to mitigate the blast by enclosing the bridge in a lattice of tiny panes of toughened plate glass. The first trial firing shattered every pane and also caused structural damage.

Critics who claimed the ships were unhandy seemed to score a point in January 1934 when *Nelson*, attempting to leave Portsmouth Harbour under her own power after a tug's tow-line parted, ran aground on Hamilton Bank. Worse than the inevitable '*Nelson-Hamilton*' jokes was a signal from the nearby Army post: '... hope you will consider yourselves honorary members of the Mess during your stay'. Cunningham was later to write of *Rodney* showing 'a majestic dilatoriness in answering her helm'. This same criticism was made by *Nelson*'s officers, to her designers' annoyance, to explain the grounding. Both sides were relieved when expert investigation attributed the mishap to the 'canal effect' likely to swing off-course any big ship operating her powerful engines in a narrow channel. But the ships were not difficult to handle. Once the unusual configuration was mastered and the characteristics known, the ships provided no problems of seamanship.

Before war came, *Nelson* and *Rodney* both served at various times as flag-ships in the Atlantic, Mediterranean and Home Fleets. Both were affected by the 'Invergordon Mutiny' of 1931. Men from *Rodney* are said to have been among the leaders of that brief, unhappy 'strike'.

Rodney, with a launching catapult, carried one aircraft from 1934 (until 1943). *Nelson*, with a crane to lift her one aircraft to the water for take-off, was chosen to test out the Supermarine Seagull V, aircraft K4797, prototype of the famous 'Walrus' amphibian. On 4 October 1935, piloted by Lieutenant J. de F. Jago, K4797 took off from Hendon to



carry Admiral Sir Roger Backhouse, C-in-C Home Fleet. Forced by cloud to fly below 2,000ft over land, Jago lowered his wheels as regulations demanded. At Portland the weather was clear; Jago brought K4797 in to land on the calm water alongside *Nelson*—with the wheels still down. A midshipman dived from the battleship's deck and reached the aircraft just as its WT operator, Lieutenant Commander Torlesse, struggled through the after hatch, with Jago—who had somehow dragged the Admiral clear of the cramped and flooded cockpit—close behind. The worst injury was Torlesse's broken nose. K4797 was so close to *Nelson* that she was saved from sinking. Repaired by Supermarine, the aircraft rejoined the battleship early in 1936—only to be wrecked beyond repair by striking an anti-submarine boom while taking-off for her first flight. Happily, the prototype had done enough to convince the Admiralty of its merits, and by August 1939 some 40 ships, including *Rodney*, were equipped with Walrus amphibians and catapults.

In September 1939, Britain went to war—and to the Fleet went the signal: 'Winston is back'. Within days of his appointment as First Lord, Churchill was aboard *Nelson*, flagship Home Fleet, discussing the security of British anchorages with Admiral Forbes and his staff. Loch Ewe was thought to be the safest home anchorage—especially after the torpedoing of *Royal Oak* and the bombing of *Iron Duke* at Scapa Flow. But late in October 1939 *Leutnant* Johannes Haberkost's U31 was able to lay 18 of the modern-design magnetic mines in the Loch's entrance. On 4 December, *Nelson* fell victim to one. Badly damaged, she was forced to remain unrepaired inside the anchorage for some weeks until the remaining mines were cleared.

Before this, *Nelson* and *Rodney* had seen service in northern waters in the Home Fleet's frequent sorties against German blockade-runners. On 26 September 1939, both were with *Ark Royal* when the famous carrier was 'sunk' (for the first time) by a Ju88 bomber. On 30 October, *Nelson* came close to really being sunk. Cruising at periscope depth west of Orkney, *Leutnant* Wilhelm Zahn in U56 was presented with a submariner's dream-target. *Nelson*, *Rodney* and *Hood*—their strong escort unaware of the U-boat's presence—were steaming at a stately 12 knots. Ideally situated, and at a range of about 900 yards, Zahn fired his full spread of three torpedoes at *Nelson*. Through the U-boat's listening apparatus he heard two of his 'fish' strike home—with the dull clang of duds!

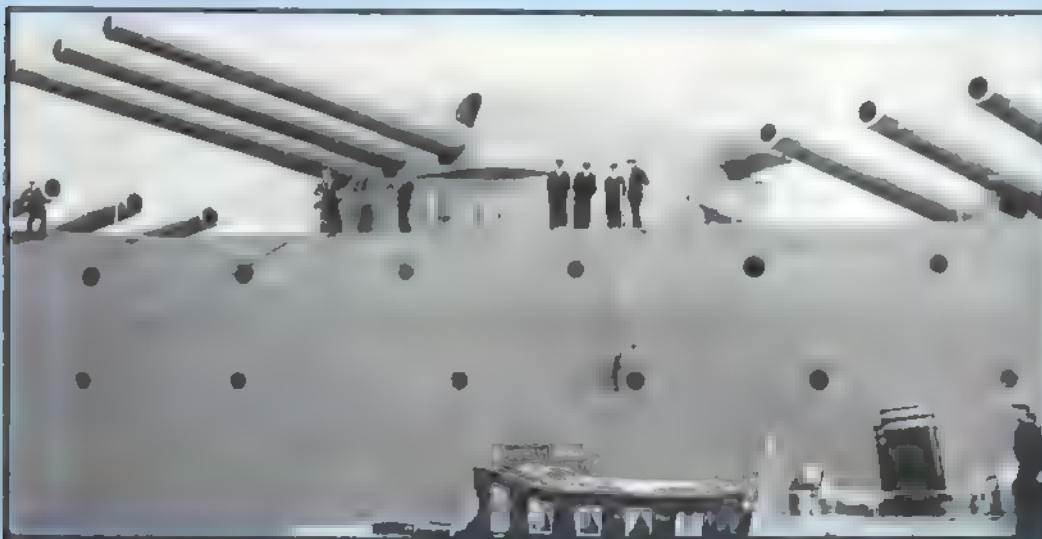
Rodney's turn for a lucky escape came on 9 April 1940, as Germany was invading Norway. Operating at first without air cover, the Fleet was dangerously exposed to German land-based aircraft. That afternoon, 47 Ju88s and 41 He111s swarmed in for a three-hour attack. The destroyer *Gurkha* was sunk, three cruisers was damaged, and *Rodney* took a direct hit from a 1,100lb bomb—which failed to detonate fully and caused only superficial damage to the battleship's armored deck. The raid exposed the inadequacy of the Royal Navy's AA armament—although nearly 50 per cent of available ammunition was fired away by some ships, only four aircraft were downed. In 1940, *Rodney* received (in addition to the 1937-38 installations) a further eight-barrelled 2pdr installation and 2 x 1 20mm MGs. *Nelson* carried more. *Nelson* also tried out a device much favoured by Churchill—UP (unrifled projectile) on two mounts. The battleships' AA armament continued to be increased throughout the war. By 1945, each carried a total of 32 x 2 pdrs in eight-barrelled mountings; 16 x 40mm in quadruple mountings (*Nelson* only); and 61 (*Rodney*) and 65 (*Nelson*) 20mm in double and single-mountings.

On 26 January 1941, Admiral Tovey—recently appointed C-in-C Home Fleet—took *Nelson* and *Rodney*, with *Repulse* and a strong cruiser and destroyer force, out of Scapa Flow in search of the German raiders *Scharnhorst* and *Gneisenau*, which had sorted from Kiel. But the raiders slipped away to ravage Atlantic convoy routes. The British ships remained alert to intercept them on their return. On 16 March, in the light of a burning ship, *Rodney* had a brief sight of *Gneisenau* as she and *Scharnhorst* took to their heels after sinking or capturing 16 vessels from a single convoy. Although every available British warship was deployed, Admiral Lutjens brought the German ships safely into Brest on 22 March.

Two months later, in the dull early light of 27 May 1941, Lutjens saw *Rodney* again. A curtain of rain lifted to show him two warships some 12 miles ahead, standing between his crippled giant *Bismarck* and the haven of Brest. Trailing oil, steering-gear shattered by a torpedo from a Swordfish, Lutjens had known for some hours that he had little chance of bringing *Bismarck* home. He signalled:

'Ship no longer maneuverable. We fight to the last shell. Long live the Fuhrer!'

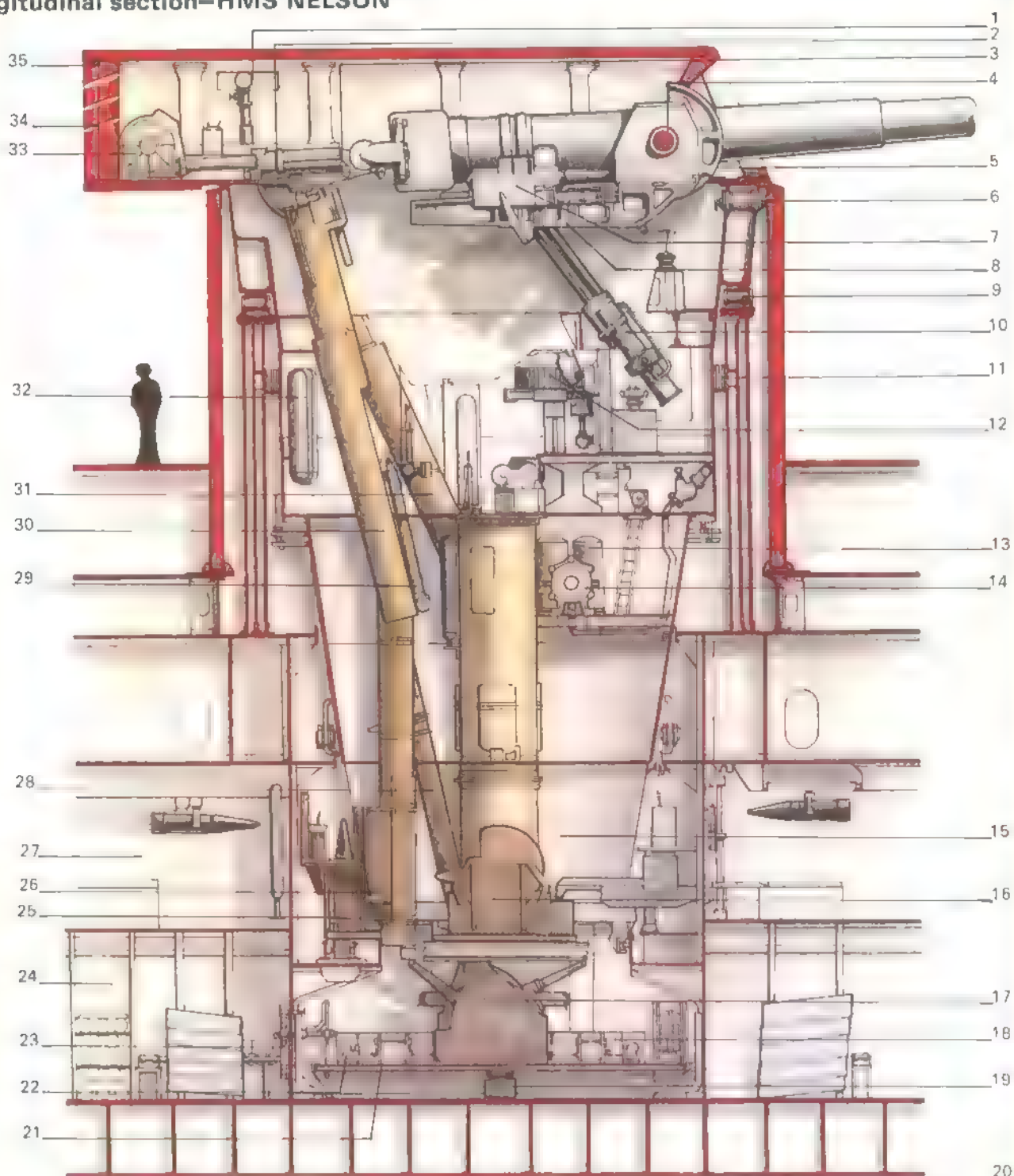
At 0847 on 27 May, watching for the fall of the first salvoes from *Rodney* and *King George V*, Lutjens prepared to make good that promise.



Petty Officers and seamen standing under the triple 16in mid-turret on the deck of *Rodney* while the battleship lies at anchor in the Pentland Firth, Orkneys, in Sept. 1937. Mid and forward turrets are ranged aft. During gunnery exercises, linings were inserted in the 16in barrels and 9in shells were fired to help save the cost of 16in ammunition. The mechanical complex of the turrets is shown in detail on the next page.

E.S. Owen

16in BREECH LOADER Mk 1 on Mk 1 TRIPLE MOUNTING
Longitudinal section—HMS NELSON



- | | | | | | | | |
|----|----------------------|----|-------------------------|----|---------------------|----|--------------------------|
| 1 | Rangefinder | 11 | Training rack | 19 | Center pivot | 29 | Cordite lifting cylinder |
| 2 | Cordite tilting tray | 12 | Training pinion | 20 | Keel of Nelson | 30 | Shell hoist (center) |
| 3 | Shell tilting tray | 13 | Gun washout water tanks | 21 | Revolving pivot | 31 | Shell hoist (side) |
| 4 | Trunnion | 14 | Hydraulic accumulator | 22 | Cordite rammer | 32 | Air blast bottles |
| 5 | Blast excluder | 15 | Shell handling room | 23 | Flash door | 33 | Rammer |
| 6 | Turret locking bolt | 16 | Shell loading bogie | 24 | Magazine | 34 | Ventilating holes |
| 7 | Rear cradle | 17 | Cordite tilting hopper | 25 | Shell loading bogie | 35 | Counter-balance weight |
| 8 | Slide | 18 | Swinging trays | 26 | Revolving scuttle | | |
| 9 | Turret rollers | | | 27 | Shell room | | |
| 10 | Elevating cylinder | | | 28 | Cordite hoist | | |

The story of the *Bismarck* action is often told, but not all accounts do full justice to Captain—later Admiral Sir Frederick—Dalrymple-Hamilton of *Rodney*. Joining the hunt on 23 May, when an Admiralty signal called *Rodney* away from her course to the US and a much-needed refit, Dalrymple-Hamilton was quick to deduce that the course given him by the Admiralty was mistaken and that he had best use his own judgement if he was to meet *Bismarck*. Only once in the 40 hours he nursed *Rodney's* badly worn machinery along his chosen course did Dalrymple-Hamilton break radio silence to give the Admiralty his true position. His meeting with Admiral Tovey in *King George V* at about 1800 on 26 May—only about 100 miles from *Bismarck*—was the result of magnificent seamanship. But for a time it seemed all in vain. Both battleships were low on fuel and *Bismarck*, though damaged, could still outrun the slow *Rodney*. Then came word of the successful Swordfish attack.

Tovey's battle-plan called for the battleships to make their first contact with *Bismarck* from dead ahead for maximum 'shock', and then to close quickly. Thereafter, Dalrymple-Hamilton was given leave to handle *Rodney* as he thought best. In the opening minutes of *Bismarck's* last fight, her gunners had straddled and hit *Rodney*. But at 0853, with the range down to around 14,000 yards, the British battleships turned so as to be able to bring full broad-sides to bear and, with the cruisers *Norfolk* and *Dorsetshire* adding their 8in fire, shell-bursts flashed on *Bismarck's* great bulk. But only two or three full broadsides salvos were fired. At 0905, with her fire-control centers knocked out and forward



Imperial War Museum

turrets silenced, she still hit back, damaging *Rodney's* starboard bow with a near-miss. By 1000, the British ships had closed to 'point-blank target practice' range, but far from exulting in the vengeance they were taking for the loss of *Hood*, both Tovey and Dalrymple-Hamilton regretted having to pour heavy shells into the blazing wreck, which was slowly settling in in the water on an even keel. A few minutes later, with fuel very low, Tovey ordered the battleships to break off. At 1036, after her crew had fired scuttling-charges and she had taken torpedo-hits from the British cruisers, *Bismarck* sank with her battle-flag still flying, taking Lütjens and more than 2,000 of his men with her.

A German historian has claimed that *Rodney* scored a torpedo-hit on *Bismarck* (both *Nelson* and *Rodney* mounted two submerged 24.5in torpedo-tubes forward) but this is not supported by other sources. Nor is the German claim, repeated as recently as 1972, that *Rodney* sustained severe damage from *Bismarck's* gunfire. Considerable damage had been done—at Boston, where she soon arrived to refit, leaks were found in the main deck, with structural damage to bulkheads and quarter-deck—but by the blast from *Rodney's* own guns.

While *Rodney* lay at Boston, *Nelson* went to the Mediterranean, arriving in time to help Vice-Admiral Somerville's 'Force H' escort a convoy to Malta in late July 1941. By September, when the 'Halberd' convoy sailed from Malta, *Rodney* had joined her sister-ship in these vital supply operations. Thanks to poor Italian reconnaissance and to the Italian command's reluctance to commit its modern units to battle, 'Halberd' made Malta with the loss of only one freighter out of nine. *Nelson*, however, sustained a torpedo-hit during a series of air attacks south of Sardinia, near the area nicknamed 'Bomb Alley'. The hit was something of a freak—*Nelson* was struck on the bow by a torpedo seemingly travelling an exactly opposite course to the battleship—and little damage was caused. Italian and German mining-craft, submarines and aircraft were deployed against the convoy and Rear-Admiral Syfret's covering force, headed by *Nelson* and *Rodney*.

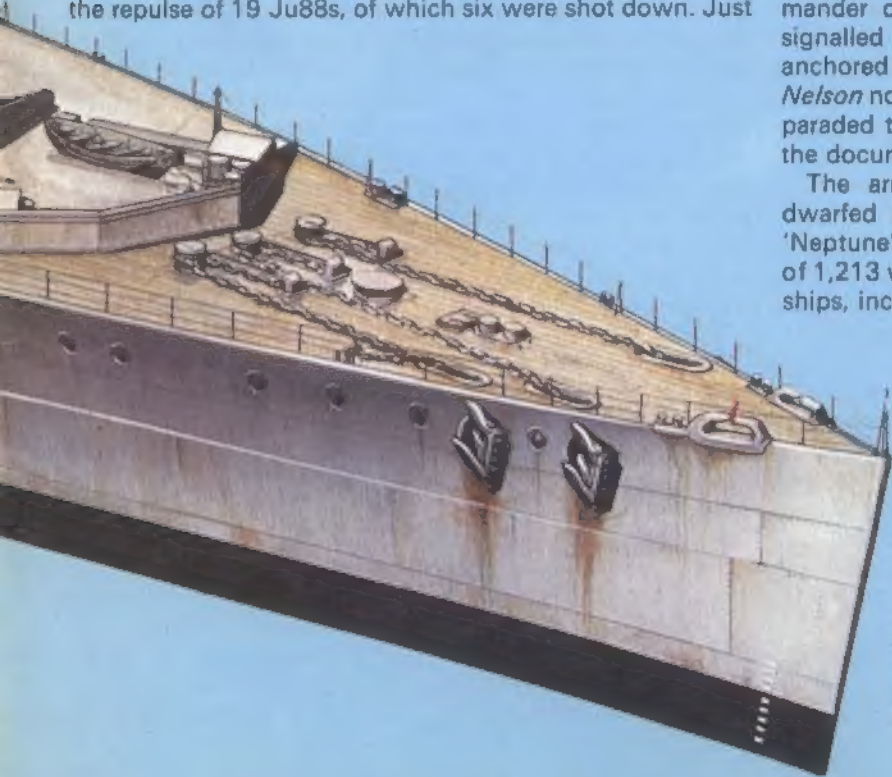
A series of savage air attacks on 12 August began with the repulse of 19 Ju88s, of which six were shot down. Just

after 1200, 43 Italian bombers and torpedo-planes and 37 Ju88s, with a strong fighter escort, attacked Syfret's force. As every gun in the fleet hurled metal skyward, *Nelson* and *Rodney* opened 16in fire at low-flying torpedo-bombers—creating a fearsome 'splash barrage'. The aircraft were driven off, but shortly before 1900 29 Ju87 Stukas roared in to attack. *Rodney* was near-missed, a bomb that seemed certain to hit splashing only 20 yards to port as the result of smart handling by Captain Rivett-Carnac. As against *Bismarck*, *Rodney's* damage was self-inflicted. High-speed maneuvering had overtaxed her machinery and loss of speed caused her withdrawal early next day.

Nelson was the unattained objective of the daring raid on Gibraltar by Italian 'charioteers' in September 1941. In autumn 1942 *Rodney* also became the target of 'human torpedoes'—British 'charioteers' practising in Loch Cairnbawn for the first, unsuccessful, attack of this kind on *Tirpitz*. By November that year, *Rodney* was back in action against another enemy in the Mediterranean—the Vichy-French forces opposing the Allied landings at Algiers and Oran. French coastal artillery near Oran damaged attack-transports for Operation Torch on 8 November and threatened to delay consolidation of the landings, until *Rodney's* 16in fire silenced the batteries of Fort Santon. In the following weeks, *Nelson* and *Rodney* steamed with 'Force H' along the North African coast, their presence reminding potential Vichy supporters that the Allied naval arm was strong.

On 17 June 1943, flying Vice-Admiral Willis's flag, *Nelson* steamed from Scapa Flow with *Rodney* and a strong squadron to join the largest invasion fleet yet mustered in World War II—280 warships, 320 merchantmen, 2,125 landing ships and smaller craft—for Operation Husky, the Sicilian landings. Willis's ship, standing guard in the Ionian Sea, had a quiet time at first, but their big guns were soon needed for Operation Baytown, the landings at the 'toe' of Italy on 3 September, where they shelled and silenced coastal batteries around Reggio and Villa San Giovanni. On 8 September, *Nelson* and *Rodney* helped to provide cover for the Salerno assault. Admiral Cunningham, overall commander of amphibious operations in the Mediterranean, signalled on 11 September: 'The Italian Fleet is now anchored under the guns of Malta'—and it was there that *Nelson* now steamed. On 29 September, the ship's company paraded to receive aboard Marshal Badoglio, who signed the documents of Italy's surrender.

The armada gathered for the Italian operations was dwarfed by that assembled in June 1944 for Operation 'Neptune'—the amphibious phase of 'Overlord'. Of a total of 1,213 warships, the bombardment groups comprised 137 ships, including seven battleships: *Nelson*, *Rodney* (at first



Peter Sisson/Tony Bryan

The powerful and pleasing lines of the '1921 unit' HMS Nelson, mirrored by her sister-ship Rodney. Placing the machinery aft and the main 9 x 16in armament forward of the bridge enabled these ships to combine speed and great hitting power. During the years of World War II their AA armament was stiffened. (Inset) smoke and flame burst from the mid-triple 16in turret of Nelson as she steams through seas in gale-force winds. Dazzle camouflage indicates a wartime photograph.



1 HMS Rodney at peace, fore turret's guns with tampions.

2 A sorry sight. The same ship in the breakers' yard at Inverkeithing, Scotland, 1948. The great 16in barrels have been sawn off.

3 Three RN capital ships in course of demolition by Thos. W. Ward Ltd.—Rodney, Nelson and Revenge.

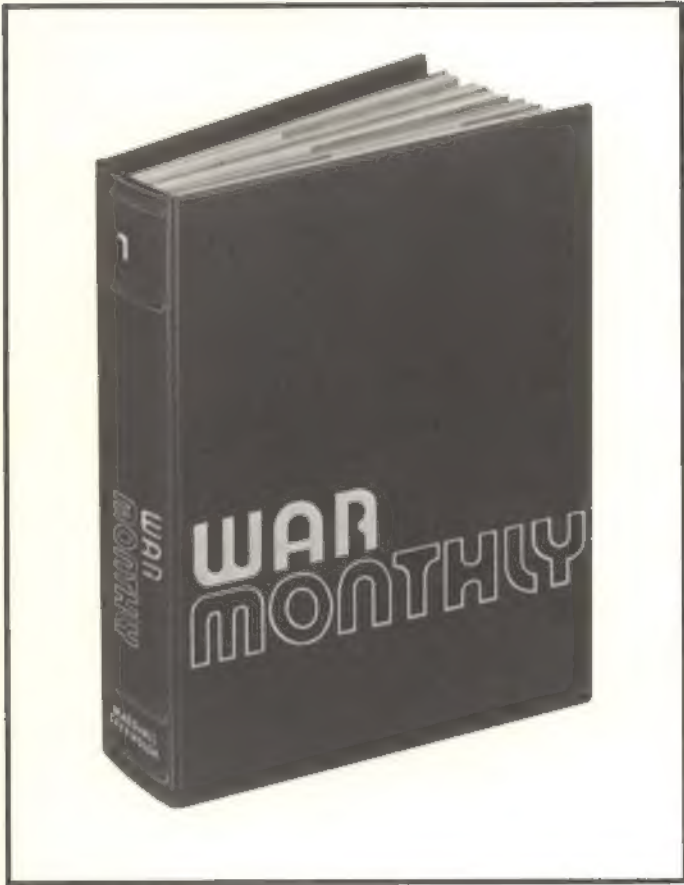
in reserve), *Warspite*, *Ramillies*, and the US Navy's *Texas*, *Nevada* and *Arkansas*. Naval supporting fire was an important contribution to the success of the D-Day landings. The Joint Technical Warfare Committee's report stated that 'the only weapon capable of penetrating the strong concrete protection of the casemated guns (of the German coastal batteries) was the armor-piercing shell from the main armament of battleships and monitors'. But tremendous fire-power was needed to silence such batteries. Against an installation at Benerville, *Rodney*, *Warspite*, *Ramillies* and the monitor *Roberts* expended 284 rounds of 16 and 15in and 58 rounds of 6in without scoring a single direct hit on a gun—neutralizing the battery by sheer weight of fire alone. Against lightly protected positions or troop movements in the open, however, such fire was devastating. An officer of the 9th SS *Panzer* Division reported that his unit's 45-ton Panther tanks could be overturned by the blast of a 16in shell, and Rommel himself told Hitler that 'an operation either with infantry or armored formations is impossible in an area commanded by this rapid-firing artillery'. (*Nelson* and *Rodney* could fire one round per 16in gun every 60-65 seconds, and 4.6 rounds of 6in per minute.) Allied air superiority and consequent 'spotting' efficiency was such that the battleships' 16in guns could be relied upon to drop their shells on targets up to 17 miles inland. The HE shells weighed 2,048lb, and the APC projectiles 2,053lb; the cordite charges weighed 510lb. *Nelson's* accuracy was singled out for special praise by military units ashore, while *Rodney* distinguished herself when bombarding Caen early in July and firing against German batteries on Alderney, Channel Islands, in August.

Rodney was to end the war in home waters, after Arctic

convoy duties late in 1944. *Nelson*, however, went to the Indian Ocean, where she flew Vice-Admiral Walker's flag in the East Indies Fleet. In July 1945, while covering mine-sweeping operations off Phuket Island, Malaya, the flagship's radar picked up aircraft headed for the force. By some communications failure, *Nelson* failed to call in the patrolling Hellcats of escort carriers *Ameer* and *Empress* to intercept, with the result that the battleship and the cruiser *Sussex* found themselves the target of Japanese kamikaze suicide bombers. An attack by two 'Vals' resulted in a near-miss on *Sussex*, while a similar attack a little later sank a mine-sweeper. It was *Nelson's* last taste of action. On 28 August, the fleet anchored off Penang, where, five days later aboard his flagship, Vice-Admiral Walker took the surrender of all Japanese forces in the area. And on 12 September, *Nelson* lay at Singapore. Her guns thundered out a salute as Admiral Lord Mountbatten's HQ announced the surrender of all Japanese forces in South-East Asia.

Early in 1944, Winston Churchill had expressed the view that '... for the post-war Fleet we should aim at survivors of the *King George Vs*, one modernized *Nelson*, *Vanguard*, four 16in battleships ... and we should claim the two (Italian) *Littorios*, a potential total of 12 battleships. This of course depends upon whether the battleship is not rendered obsolete by new inventions. So far this has certainly not been the case'. But the end of 1945 saw the rejection of both Britain's war-leader and the proud fleet he envisaged. Not one of the Royal Navy's great battleships has been preserved. 'Moth-balled' and then marked for destruction, *Rodney* made her last voyage to the breakers at Inverkeithing in March 1948, followed one year later by *Nelson*.

Richard O'Neill



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